Community Eco-Gardens

Landscaping with Native Plants

Dennis Swiftdeer Paige

Foreword by Douglas W. Tallamy

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Front cover: Dennis Swiftdeer Paige kneeling
by the bioswale in 2016 (photograph by Matt Streitmatter)

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To all the stewards and active dreamers for a better earth
willing to kneel on the ground for planting native flora
because they know the ecological wisdom and joy
comes in the doing, not just the knowing.

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Foreword
by Douglas W. Tallamy

Dennis Paige is a dreamer and always has been. He dreams of a time when people will recognize plants for what they are: the life blood of planet earth. He dreams of a culture in which what a plant does is valued every bit as much as what it looks like. He dreams of places where the native plant communities that run our ecosystems are the dominant land covers rather than lifeless lawn. He dreams of a land that can boast about growing pollinator populations, billions of migrating monarchs, and large, diverse bird communities, all products of sustainable landscaping practices. And Dennis dreams of environmental policies that no longer include an Endangered Species Act, because there is not a single species of plant or animal that is in danger of extinction.

Powerful dreams, indeed, and in this book, Dennis recounts life-long efforts to bring his dreams to reality. Dennis Paige writes with passion about his personal experiences, honestly reliving both his successes and failures. Throughout his story we learn about his encounters with mindsets, priorities and attitudes completely foreign to his own and how he reacted to them. There is an urgency that underlies Dennis's prose and it is clear from page one that his goal is to so infect readers with his love of the natural world that they will begin to heal small parts of the earth as he has. Yes, Dennis Paige is a dreamer, but he is not the first and I am hopeful he will not be the last.

In some ways, Dennis's story reminds me of Aldo Leopold, one of the greatest of all environmental dreamers. Of course, the specifics of Aldo's and Dennis's lives differ dramatically, but there is a striking similarity to their dreams. When Aldo Leopold moved from his job as forester in New Mexico to the faculty at the University of Wisconsin, he flourished. Shortly after his arrival in 1924, Leopold initiated a program in game management, wrote the first and arguably most famous textbook on wildlife

management, and founded the Wilderness Society. Yet despite these successes, he was deeply disturbed by what he saw around him; in almost every way people were destroying the natural world he loved so dearly. Society's relationship with what he famously called "the land" was not a relationship at all, but a unidirectional exploitation of resources without giving anything in return. Farming techniques encouraged catastrophic erosion; rangelands were overgrazed; rivers were sewage receptacles; wetlands were drained; and grasslands were plowed. Clearcutting transformed majestic forests into wastelands, and wildlife was slaughtered in such numbers that many species were extirpated from Wisconsin.

But Aldo had a dream. He dreamt of a time when people humbly accepted their role as citizens of the natural world rather than its conquerors; a time when the land was not viewed as a commodity to be exploited but as the source of our continued existence. He longed for a time when people appreciated and even respected wilderness, not just as a hunting or recreational playground but as a truly awesome and unimaginably complex machine that required all of its parts to function well. Like Dennis Paige, these dreams didn't come to Leopold overnight; they came from a lifetime of thoughtful observation, reflection, and informal experimentation. Aldo Leopold synthesized his experiences into *A Sand County Almanac*, a classic work that has sold more than two million copies, yet for some reason, his wisdom has barely penetrated our culture. Though persuasive and moving, Leopold's plea for a land ethic has thus far been unable to change the near universal belief that people are here and nature is somewhere else. And this is where philosophical musings about conservation have run head on into the brick wall of the earth's finite size and resources. The biosphere, that frighteningly thin zone at the earth's surface to which life is constrained, is not getting any bigger. There is no more land today than there was 600,000 years ago when Homo erectus first harnessed fire. In fact, the resources that support life on earth are all under pressure from growing human populations and consumption.

Where is our expression of an ethical relationship with the land and the life it supports when we fragment forests to add another housing development, pave more roads, seed a new sterile lawn, build another shopping mall, or expand another airport? It is not part of the discussion. After all, people argue, we need these things; our economy must continue to grow forever, even though such growth is antithetical to the laws of physics. Conservation is fine as long as we do it in ways that do not constrain the human activities we call progress—as long as we do it someplace else.

But as Dennis explains in his book, giving up is not an option; our current model of destroying the biosphere to expand the human footprint is not now and never has been sustainable. And so, we need a new

conservation plan, one that sustains the living systems we depend on everywhere: where humans dwell as well as where they do not. We must abandon our age-old notion that humans and nature cannot mix. Starting now we must learn how to coexist. Aldo Leopold recognized that the conservation model he had followed in the west, setting aside large tracts of government land, would not work in Wisconsin because most land was privately owned. His solution was to teach farmers and ranchers techniques to restore and conserve the natural resources on their own lands. With incredible foresight Leopold suggested that we "reward the private landowner who conserves the public interest."

Today, with over 82 percent of the U.S. privately owned, it is clear that Leopold's approach is an important part of the solution; if conservation is to happen, it must happen on largely private property, just like the property you, I and Dennis own. But not just on farms and ranches as Aldo thought, but rather on all types of property, from the smallest city lot to the largest corporate landscape. The U.S. could become a model for the rest of the world in this regard. If we can save biodiversity here, where aggressive economic development has been the goal for centuries, where McMansions have replaced modest homes in affluent communities across America, where we have paved over an area larger than Ohio, where we have airports twice the size of Manhattan, where mega-farming in the absence of hedgerows was invented, and where biological wastelands we call lawns are a core symbol of wealth and status and now cover an area the size of New England, we can save biodiversity everywhere.

Our relationship with the earth is broken. Leopold dreamt of ways to fix it as Dennis Paige dreams of them now, but the conservation approaches developed in the 20th century are not inclusive enough to realize their dreams. We need a new conservation toolbox, packed with new and more effective tools. New knowledge will be our most important tool, followed by a cultural recognition that conservation is everyone's responsibility, not just those few who make it their profession.

Dennis is helping us learn how to redesign both public and private landscapes in ways that meet the aesthetic, cultural and practical needs of humans without devastating the resources needed by other species. We are learning how to convert at least half of the area now in lawn to attractive landscapes packed from the ground to the canopy with plants that will sustain complex food webs, sequester carbon, manage our watersheds, rebuild our soils and support a diversity of pollinators and natural enemies. That is, we are learning how to create landscapes that contribute to rather than degrade local ecosystems.

These are exciting times. The necessary task of restoring ecological function to the land lies mostly before us. But it is an exhilarating,

entertaining, and hugely rewarding task. Aldo Leopold once lamented that "the oldest task in human history is to live on a piece of land without spoiling it." In the past, we have not known how to do this, but we know now. There are few of us who cannot improve our relationship with the land we "own." Most of us bought it already spoiled, so now we must fix it. In the coming pages, Dennis Paige helps us begin this task. Join him on his journey to turn dreams of a sustainable relationship with Earth into reality.

Douglas Tallamy is a professor and chair of the Department of Entomology and Wildlife Ecology at the University of Delaware.

Preface

To most people, native landscaping is an unknown world. Many misconceptions persist. How should we treat the land with nurturing ecological care and beauty, as cosmic transient sojourners passing through time and space? That's what native landscaping is ultimately all about.

From the first historic appearance of Europeans in the land many First Nations called Turtle Island, or what we modern dwellers call North America, there has been a dreadful tension at work in our culture. On the one hand, many European explorers and settlers were overwhelmed by the collective beauty and grandeur of this continental landscape, sufficiently impressed to imagine that biblical paradise might lie somewhere in these regions. On the other hand, from the time they set foot on this side of the planet, they were intent on radically deforming what they had found. What we have loved, we also have destroyed, unable to resist the cultural biases against nature, ignoring ecological understanding on the land, while climbing up the status ladder of economic well being. Many generations of indigenous peoples walked the land with a co-evolving understanding of how the earth moves and breathes, but modern society has forgotten how to relate to nature in a personal, life affirming kinship way.

Imagine creating a place where plants which have co-evolved over thousands of years have been given a chance to return to an accepting community, rethreading a balanced web of life that's been missing for far too long. With each attempt to regenerate a spark of interconnectedness to the ecology of the land comes a responsibility to show respect and gratitude for what we have been given. The power of this journey in life is not to dominate but to understand.

Now imagine living in a place where treating the land as if nature does not matter is commonplace. This is not tough to imagine, is it? This is where most of us live every day, whether we realize it or not. It is all too easy to conjure up images of landscapes derived from endless pesticide-

and herbicide-induced lawn care, static unchanging evergreens, lollypop trimmed trees, and uniformed pruned shrubs, a place where you rarely see any butterflies, bees, hummingbirds, migratory song birds, or wildlife. Not just *Silent Springs* as Rachel Carson so hauntingly describes, but silent seasons. This describes the condominium community where I moved after finishing graduate school. A home garden or large tracts of lawn are often seen as separate from the natural world. In truth, they are actually just one part of a grander landscape made up of many living layers. The replacement of the rich, complex layers of native flora that once filled this land with turf grass diminishes and destroys a garden's biological diversity and ecological function.

As an environmental educator, naturalist, and conservation practitioner working at a local nature center, I have learned to "kneel for natives." I cannot deeply describe how grateful and beautiful that journey has been. But I will try.

This is a story that I hope will inspire those considering taking the plunge toward a healthier, ecologically nurturing relationship with their home gardens, schools, places of worship, corporate property, government land, small businesses, libraries, and residential associations. It takes place on an environmentally degraded condominium landscape where I was gradually given the privilege of introducing a renewed vision for what our environment ought to be. I helped to convert lawn into major award-winning pockets of showcase Midwestern native gardens. I listened to native wisdom and followed an indigenous tradition of belonging and relating to everything that grows or lives on the land. I was entrusted by the homeowners, management, and board of my condominium association to act in the best interest of bringing nature back with a nurturing aesthetic sense of affordable conservation practices.

Thus, it began simply. A few rescued transplanted plants here. A few more there. Eventually, a rather simple after work pleasure became a consuming passionate force—a calling and a life purpose.

My story is an evolving chronicle of awakening—my own awakening. It is the story of how one person for nearly 20 years, with the help of the greater community, thoughtfully transformed a neglected condominium landscape into an unfolding range of stunning multi-seasonal prairie with woodland and wetland eco-gardens and micro-habitats. To my knowledge, there has never been a detailed written and photographic account of ecologically reconciling condominium land over such a stretch of time. More importantly, this is a transcendent story of how nature can become a sage in life and teach us not to be an enemy of the earth but a friend.

My reason for writing was not simply to chronicle what we did, but

this: If we can put our collective minds, hearts, and hands together to include nature for the sake of our children and dying ecosystems, then maybe we can leave a legacy for a better planet when we are gone. With care and attention, perhaps we can make it so that natural history is richly celebrated and revered once again rooted where we live.

1

Layering the Foundation

The word human is derived from the Latin word "humus" meaning of the earth, soil, and ground. Our ancient language knew we were earth born. Yet how close are we as humans to understanding and deeply appreciating the evolution of soils in our lives today? It may amaze you what you may discover in your wild, uncultivated, pesticide free soils. There is an unspoken interwoven wilderness beneath our feet, a hidden cosmos with billions and billions of life forms (most of them still unknown to science). A gram of fertile soil, about enough to cover a human thumbnail, has one billion individual cells of soil bacteria and more than 500 meters (1,650 feet) of microscopic fungi. In addition, hundreds of thousands of algal cells, viruses and hundreds of microscopic invertebrates and worms share the same space.

In most parts of the world there is more life beneath the surface of the soil than above it. In a few shovel loads of forest soils, for instance, there may be more than 1,000 different types of organisms and as many different types of mites. In a square meter (1.2 square yards) there can be more than 10 million microscopic worms and one-celled animals and thousands of other invertebrates, including several hundred earthworms. Realizing this, we can deeply see that the Earth is truly alive.

But nearly everything humans do to the soil kills these organisms, directly or indirectly. They are poisoned by pesticides, herbicides, fungicides, and fertilizers, and starved of a balanced diet by our failure to return our wastes to the soil. Yet, it is upon these very organisms that the productivity of our farms, ultimately, we ourselves rely upon for survival. Clearly, soil is an ecosystem comprised of thousands of different species that behave in much the same manner as all other ecosystems. Disturbing a soil ecosystem is similar to the effect of disturbing a wetlands, prairie or forest ecosystem; it can lose species in the same manner that we lose species in any functioning ecosystem.

Simply put, soil is the foundation for nurturing all terrestrial, complex living systems above or below the ground. However, only ten percent of

the surface of earth is useable soil. The rest of the land is too hot, too cold, too steep, too dry, too wet, or too chemically polluted to create healthy organically activated soils. When factoring over 7.5 billion people and still growing, living within this shrinking healthy soil, creating expanded roads and concrete mega-infrastructures, extracting industries failing to replace the damage done to the earth, sprawling cities, towns and suburbs, one begins to see the insurmountable challenges of turning these ominous cancerous influences into an ecologically sustainable future in balance with evolved life on the planet.

My home state of Illinois ranks 49th in the nation for setting aside land to protect natural pre-settlement (before 1820) virgin conditions. Only one hundredth of 1 percent of the remaining prairie still remains once proudly titled as a "tall grass prairie state."[1]

Thousands of years of compressed glaciated boosting mineralization resulted in two thirds of the state having a vast flattened terrain of temperate prairie ecosystems consisting of uniquely diverse wet, dry and mesic plant communities, generating some of the richest topsoil in the world. But only Iowa ranks lower than Illinois in remaining virgin landscapes due to their mega-sacrificial land use of agricultural production and excessive harmful impact of pesticides and livestock waste. However, the Land of Lincoln ranks 32nd in the nation for conservation efforts to restore the land that has been forever erased from the evolutionary face of the planet.[2] There appears to be a slow, encouraging awakening for addressing such ecological negligence and rampant development. But the push toward a reconciliation with the land may not be coming from the state or federal government in the years ahead.

Illinois's state budget cuts are facing severe shortages in operating government agencies especially within the Department of Natural Resources where much open land could be set aside to preserve protected natural areas. Some northern counties like Cook, Will, Lake, DuPage and McHenry are investing wisely in expanding conservation areas while others are limiting their spending to keep a growing financial deficit crisis from escalating. That is where individual homeowners, large corporations, places of worship, small businesses, schools, libraries, and residential associations can ameliorate such a serious issue by bringing a living landscape back to the state and beyond the border.

Even a City Boy Can Fall in Love with the Soil

I grew up in the late 1940s and 1950s on the northwest side of Chicago above a tavern that my grandparents, aunt and uncle and parents

owned and operated. As a hyperactive child with an insatiable curiosity, I needed to play outside or I would drive my parents crazy being cooped up in a small apartment flat. So there were two places my parents took me to play. The first was directly behind our building. During the winter I would bring my little toy dinosaurs to play in a sultry subtropical and tropical botanical glass bubble house. I don't remember Mom and Dad watching over me because I was so wrapped up in fantasizing my prehistoric scenarios. The store keepers would allow me to play there on frigid days when the frosty glass windows were fogged up from condensation, creating a remote exotic atmosphere which invited me to feel distant from the static and dreary urban winter landscapes.

In the heart of the city of Chicago during my early childhood in the early 1950s, I found a captivating natural landscape just a few blocks from home called the *Olson Rug Park and Waterfalls*. This constructed wild and scenic setting was filled with a rich multi-sensory experience as if one were transported into the great North Woods.

When the weather warmed up I would pester my parents to take me to my favorite outdoor urban oasis. Mr. Walter E. Olson built a 22-acre park full of greenery through the help of the F.D.R. Work Projects Administration (W.P.A.) in the 1930s right next to his rug manufacturing mill at Diversey and Pulaski (then named Crawford). Olson, who owned a vacation home in Little St. Germaine, Wisconsin, desired to "transplant some of the Wisconsin out of doors spirit to the then somewhat drab factory grounds," as one *Chicago Tribune* article puts it.[3] Approximately 3,500 perennials, along with numerous species of junipers, spruces, pines, arborvitaes and annuals served as a stark contrast to the area's industrial and commercial surroundings. Olson Park's stunning rock garden, duck pond, and 35-foot waterfall made it a Chicago haven for weekend family outings for decades.

I remember the soft colored white lights that would illuminate both sides of a cascading waterfalls while I would step up on high stone laid stairs to reach the top of the falls, imprinting a sense of joy that still brings me a smile. I can still hear the deafening rush of the waterfalls and feel the soothing mist rising up from this short lived joyous adventurous escape. The opening of the park took place in 1935 on the 100th anniversary of the expulsion of Native American tribes from Illinois across the Mississippi and included a symbolic gesture deeding back the area of the park to the First Peoples. This motif was kept up with visiting American Indian Chippewa chiefs performing war dances in full regalia at the park from time to time.

It was there that I fell in love with the soil. But eventually, both the next-door greenhouse and waterfalls park became vacant lots for new urban investments, indifferent to a child's world of discovery and play or

an urban family outing on the weekend. The reality of living in Chicago is that there is always an artificial commercial application of using land with short lived affinities detached from an evolving inter woven natural world of plants, wildlife and healthy undisturbed terrain. Traumatically unsettling terrestrial transiency is an ongoing part of living in the city. By 1978 the legendary waterfalls were turned off, and the park was dismantled to make room for a parking lot at the site.

In Wildness Is the Preservation of Childhood

When my family moved from the big city to an adjacent suburban industrial town of Maywood in the mid–1950s, I had more opportunity to fulfill my free ranging boyhood aspirations with the great outdoors. My parents would let me roam the neighborhoods, the open fields pre-dating commercial development, and local marshes as a part of my expansive playground. I enjoyed lying on the wild grasses drawn to the infinite mysteries of how nature moved, watching clouds float on a slow late summer day, stalking ring tailed pheasants to get a closer look, chasing cottontails, or snatching crawdads with my hands in marshy channels and open park ponds. I remember carefully grabbing green garter snakes in my backyard hidden among a shrubby shadowy thicket along my neighbor's garage and raising leopard frogs in a two-feet-deep crock pot of water with a floating lily pad rooted into the mucky bottom where these captive amphibians would hibernate.

I would ride my single speed bicycle to fishing spots several miles away from home, sometimes traveling 30 miles round trip at the age of 11. One time I rode my weather-beaten bike 80 miles round trip from Maywood to Romeoville with a buddy to a cold swimming quarry lake teeming with enormous fresh water fish. As long as I got home before the neighborhood street lights glowed, I would not be grounded. As I wanted to keep my freedom, I seldom violated this rule. Playing outside was as much a part of me as the little permanent scars accumulated from the engaging adventures and mishaps of my childhood and youth. I trusted nature and being outdoors so much that at the age of 6 years old I actually allowed a garter snake's tongue to enter the back of my mouth while holding this curious slitherer to earn an "I dare you" initiation (instant friendship) with a couple of boys my age, one of whom became my best buddy for the next ten years.

Away from the big city, I remember spending precious vacations during the summer with my extended family in Tomahawk, Wisconsin, where my grandparents, uncles and aunts, cousins and of course my

family would come together at a lodge in the wild North woods. One early dawn while vacationing there in our log cabin, I awoke before my Mom, Dad, older brother Wayne and baby sister Janis. Sneaking out the door just a few feet from the cabin I was greeted on a dirt road by a fawn who took an instant liking to me. At five years old, we were roughly the same eye-to-eye level height. Trust at first sight. That fawn walked me into the woods. I was a child living in the heart of the city where forests were non-existent, and that gentle yearling slowly walked across the road while I tailed along. We seemed together like kin. Scores of tall pine trees and their shadows did not scare me one bit knowing I had an accepting wildlife friend of the forest to gently guide me into this new world.

I wanted to keep a secret about this life changing encounter, but the next morning at the same time, that same fawn was waiting for me on that dirt road in the same spot. We stood quietly together until my Mom came out with a camera to shoot pictures of us. As I see those photos today, I am struck by how happy I looked. Later I was told that the reason the fawn was alone was because the mother had been lethally struck down by a car and the father was hunted. We called the fawn Honey because of its gentle sweetness. Honey stayed around our lodge as a place to find food and attention. My mom and I bottle fed the orphaned victim from my baby sister's milk bottle.

Since 1986, I have added a totem title to the name I was born with, Dennis Swiftdeer Paige, keeping me aware of how that innocent fawn lived on the edge of the forest between lightness and darkness, curious and vulnerable yet open to the kindness of a species responsible for that fawn's orphaned condition. I had a friend that was not of my kind, taking me to an unfamiliar forest that made me feel right at home. It wasn't until after I became Swiftdeer that my brother told me my father's original last name Olenicz, which, when translated from Russian, means *deer*.

I was drawn to indigenous understandings from an early age. At four years of age in Tomahawk I attended a powwow where the Chippewa Eagle Dancers were performing. I immediately ran down to the arena escaping the hands of my alarmed parents and began to mimic their circular two step stomping, gracefully winged movements. In many indigenous traditions when a young child no matter from what descent is moved by traditional dances and joins them, he or she is left alone and not discouraged from participating for it is believed that the "spirit of the Creator" is moving that child toward a higher self of connecting with Mother Earth.

Playing outside in the open air, always on the move, was an uncompromising part of my upbringing. The techno-revolutionary black and white TV did not attract me to sit inside for prolonged periods knowing that there was a colorful world of multi-sensory experiences waiting

As a young urban child vacationing with my family in the north woods of Tomahawk, Wisconsin, I gained an eye-to-eye kinship connection with a fawn and a trusting feeling for being in natural wildlife worlds.

to be explored in the immediate adventurous wilds of my neighborhood. Sadly, people today have been hooked into spending more predominant time with addictive, electronic, information driven gadgets and superb hi-definition viewing, glued to captivating lights in the artificial box no matter the size or shape.

Regretfully, as the modern world moves away from direct experiences with nature, we tend to absorb a different, more abstract experience in understanding nature. Removed from our senses, we only understand nature through reading and visual impressions exposed on screens. Needing to go outside does not become a part of our growing up; instead, learning about nature in a formal, abstract and detached manner becomes a convenient means for experiencing the world. Noted outdoor educator journalist Richard Louv considers these conditions to be detrimental to

the emotional, physical and psychological development of the child contributing to a "nature deficit disorder."[4] As we humanize technologies, we begin to detach ourselves from nature, ultimately dehumanizing ourselves from the living landscapes.

In 2010, the Kaiser Family Foundation performed an extensive study to see how many hours children from the ages of eight to 18 years old spent outside. The results were significantly low averaging about 14 hours per week but that number plummets when applied to being outside in a natural setting like an open space park, forest preserve, nature center, or a campout. No longer are most children exposed to an experientially engaging natural playground of discovery with the plants, rocks, water, wildlife, or challenging terrain in an open sky but are continually inundated by consumer oriented commercial and cultural pressures to stay inside and embrace captivating electronic devices and screens. In short, children and youth have become a media hooked generation the likes of which I could have never foreseen in my lifetime.[5]

My family moved eventually in the mid–1960s to a sleepy rural town called Schaumburg, Illinois, with scattered cornfields, pop up suburban homes, and impressive remnants of huge unscathed bur/white oaks, hackberries, elms, shagbark hickories abundant with raccoons, ring-necked pheasants, foxes, muskrats, cottontails, cardinals, Cooper's hawks, screech owls, red tailed hawks, woodchucks, great blue herons, warblers, great horned owls, yellow shafted flickers and other birds of different shades and colors. In my late teens I found much peace and solace coming home from college amidst the turbulent, war-torn, counterculture '60s.

Walking in a quiet, local, hickory-oak forest remnant leading to a sedge meadow fen soothed my troubled spirit. In the spring, I would see scores of native wildflowers the likes I never saw in Maywood: spring beauties, Dutchman breeches, shooting stars, toothwort, trilliums. I knew little about these wildflowers and sedges but was amazed no one was caring for these habitats and yet they thrived. Earning a teaching degree in history certainly did not qualify me for being an expert in natural history or ecology. But I knew what made me happy and that was being outside with the rich calming depth of nature.

I lived in a newly developed subdivision of Schaumburg where mature shagbark hickories and burr oaks were dying around the homes due to excavation. Such a disturbance with the land invited nasty, aggressive, soil inhibiting invaders like European buckthorn introduced a couple centuries ago to serve as hedgerow to keep livestock out and bush honeysuckle shrubs brought in from Asia and Western Europe in the mid–1700s as an ornamental shrub and commercialized on a grand scale in the 1950s through 1970s throughout the country. Both menacing shrubs escaped

into the wild causing tremendous, catastrophic, regional ecological consequences to the health of the soils, understory and wildlife.

I could detect the extensive damage in the forest done by these homes, mine included, decimating a pristine understory while inviting intrusive weed choking forces like garlic mustard and Canada thistle to plant their presence into a new disturbed habitat norm. Once spreading for miles as a continuum of oak savanna, sedge meadows, and mixed deciduous woodlands throughout the town, the remnant was now shrunken down to a few scores of protected acres designated as a park district run conservation area. Scattered native trees in between the homes stand impressively carrying a greatly reduced imprint of a natural history when the cyclical flow of the seasons moved with interwoven continuity and ecological complexity.

Learning and Working Outdoors

After college I joined the Peace Corps assigned to a small equatorial rainforest village in Liberia, West Africa. There, my interests with nature were strongly awakened. Fascinating communities of insects, rhinoceros beetles, hidden venomous snakes like spitting cobras, black and green mambas, disease threatening tsetse flies, wandering water buffalos, ferociously vocal baboons, and tropical birds galore conveyed a scary and amazing revelation on how much is out there to basically hurt or dazzle you. And rain, rain, and more torrential rain to fill the saturated forest with a most incredible range of well-nourished understory tropical plants. But the rainforest quietude is what I remember the most. So quiet you can hear driver ants moving diminutive food and debris, guarded on both sides of the trail by unwavering soldier ants.

When I returned to the States under a severe bout of culture shock, I was gaining an increasing restless spirit to want to learn formally and informally outside exploring the rich detail of how nature works. I returned to Illinois and attended Northwestern University in Evanston pursuing a Masters degree for Teachers in Social Studies while teaching full time at a middle school back in Schaumburg. Something that deeply troubled me while enduring this painfully awakening experience was the realization that children in most public schools were not educated to appreciate nature or engage in first hand experiences with nature outside except when recessing, in which case parking lots and mowed lawns were routine daily settings for socializing. Kids could not climb trees or rocks or roll in the fields, but only play in sterile landscapes and open flatland of continually mowed lawn during their Monday through Friday

weekday school schedule. Natural playgrounds in school yards where children can play freely were and still are extremely rare.

My professional quest to teach in an experiential, consensus based "community as a classroom" setting based on an A.S. Neill's Summerhill radical educational approach eventually led to a small, avant-garde alternative school in Santa Fe, New Mexico.[6] Averaging only 20 multi-aged, non-graded, multicultural, poverty-based children and youth, for eight years, we as a motley, informal, caring, free thinking staff guided weekly field trips. We visited wonderful places of terrestrial play like volcanic tent rocks, captivating water falls, spectacular canyons, accessible caves, natural amphitheaters, national forests, pueblo ruins, majestic time carved monuments, spring fed swimming water holes, mountainous vista hiking trails, and wilderness state parks. Children were learning how to play and cooperate in physically creative, natural settings to develop an experientially integrated social, psychological and physical appreciation for the great outdoors. Play was serious business and channeling this energy in natural settings brought out a socialization process of bringing joy, confidence and cooperation in their learning, while trusting the natural world as a grand community playground.

Studies have shown that such an education creates better performance in academics.[7] Michael Moore, for instance, created an informative documentary to compare the failure of education with the reformed, remarkable success story in Finland which involves letting children play more outside and assigning less homework.[8] But most schools today in the United States are designed to create artificial, plastic and metal driven playgrounds, monotonous settings like flat asphalt play lots, and stagnant, high-maintenance landscapes of conventional, non-native lollypop manicured trees and shrubs, where the growing seasons are static and unchanging. These are the environments that most children experience today: a landscape removed from ecological connections, guided by professionally trained indoor teachers who co-evolve with the electronic hi-tech worlds only to give up including the importance of educational and recreational play in nature's classrooms (protected nature preserves, open lands, running streams, natural rock formations, healthy ponds, local wildlife sanctuaries, nature centers, forest preserves, beaches, state parks, local wild-habitats).

In Santa Fe, with the help from a Taos pueblo woman and an Apache Hispanic adobe builder, I constructed an 18-foot diameter goose egg-shaped adobe home of 1,400 large handmade bricks where I lived off the grid for six years. Almost everything used in the making of the house was salvaged from the property. Old car windows, scrap lumber, the earth, water, and straw from the horse stable were rounded up on the school

property. Using water runoff from the pueblo designed roof's canals, I built a small vegetable garden which required very little additional outside water. Conservation of water is critical in the southwestern high desert terrain and my low impact dwelling was no exception.

After leaving Santa Fe, I returned to graduate school and earned a Master of Science degree in environmental education through the Audubon Expedition Institute at Lesley University in Cambridge, Massachusetts. We learned primarily outdoors and camped out every academic day under the stars throughout North America for two years. We combined cooperative living, earth ethics, engaging wilderness backpack/canoeing experiences, active birding, collecting traditional folk music and historical village songs, indigenous communities, meeting up with professional writers of natural history, non-renewable/renewable energy resource experts, and environmental advocates for protecting natural resources. During summer breaks I attended a global village in Virginia to work with an international group of young people from war torn situations and broken home environments. The emphasis was on building friendships between culturally conflicting differences, celebrating the international arts through music, drama, photography and creative crafts, and exploring ways to apply ecological practices to cooperative living. We were an authentic living landscape of humanity, the arts and ecology, weaving a practical and idealistic world, albeit for just the summer.

One project in this program involved working with a Palestinian Christian who knew how to stabilize the bricks and a war-torn Lebanese boy. We built an adobe Friendship Hut from scratch. We learned how people from strong political, religious and cultural differences could come together and meet with a spirit of understanding. Nobody had ever attempted building structures from adobe directly from the earth in this Blue Ridge mountain camp but we managed to do it with the help of a few kids, a Middle Eastern bricklayer and myself.

After completing these academic and professional-related experiences, I decided to return once again to Schaumburg. This time I did not want to teach in a public school, or any formal school for that matter, but wished to find work outside with nature. Changing my relationship with the earth, I chose a relatively new nature center called Spring Valley Nature Sanctuary that held 143 acres of degraded farm landscape replete with open fields of weeds like Queen Anne's lace, purple loose strife, thistles, dandelions galore, foxtail grasses, multi-flora roses, European buckthorn, bush honeysuckles, garlic mustard, and timothy grasses from rural days gone by.

I was hired as an assistant naturalist at Spring Valley, and was soon delighted to be a part of a committed vision to reconstruct and reconcile

the ecological damage done over several generations to prairie like conditions. Not only had my graduate school program not taken me to prairie preserves but I barely knew what a prairie plant was. I could not imagine public schools engaged with the students in outdoor prairie education. My background was so limited that all I could do was start over again with interpreting the removed prairie landscape. I began reading about the history of Illinois' prairies, visiting local preserves, participating in rescue relocation efforts to save threatened native plant species, and meeting up with a dedicated number of volunteer stewards. I became convinced that the most important work I could do in my life was to bring nature back to my vanishing, rural, multi-national franchise booming community.

Moving into my parents' town home in Schaumburg for a year and a half allowed me to walk daily to and from work about a mile away from Spring Valley. Learning about the native woodland and prairie plants in the area, I began to introduce these plants to my parents' diminutive front gardens. Planting trilliums, phloxes, asters, purple coneflowers, and little blue stem brought a pleasing touch of Illinois flora, but the homeowner's association hired landscapers did not discriminate between a native plant and a weed. If the plants were not in the landscaping plan they needed to be removed. I combined native and non-native perennials but they literally dug up these little native treasures as weedy, unidentified invaders. I brought this issue up to the homeowner's association and encouraged them to pay more attention to plants that are heritage-based reflections of our local natural history. Soon, the association decided to distribute a system whereby if a bluebird sticker appeared on the window of someone's town home that would indicate the gardens they owned were being cared for and were to be left untouched. The association did recommend a list of the plants intended to grow to make sure they weren't weedy appearing but for the most part the system worked and the hired landscapers did not dig up these plants anymore. In fact, the association compensated me for the damage done to my parents' garden: $62 worth.

Working outdoors with kids in environmental education, I was able to free myself from evaluating and standardizing children detached from the natural worlds. I loved being experientially involved with the children, helping them to see how wonderful and enchanting nature can be when obligatory strings of formal expectations were removed and we could spontaneously share curious common moments with the rich detail of mother earth's life close to home.

All of these personal experiences in search of a deep ecological sense of place accumulated over time to lay a healthy foundation in my life like nurtured topsoil readily preparing for seeds of consciousness. I was beginning to preserve the ecological integrity of the land on my chosen path

toward happiness and fulfillment. By remembering the Earth, that she is a part of us and that we are a part of her, I was helping my little spot on the planet as well as myself regain a balance of healing a forgotten nature not based on separation but mindful-affective cooperation.

Two of my most beloved quotes on the relevance of laying such an awakening foundation come to mind now, all these years later. Tom Joad refers to his murdered union organizer preacher friend Casey in John Steinbeck's *Grapes of Wrath*, "A fellow ain't got a soul of his own, just a little piece of a big soul, the one big soul that belongs to everybody."[9] And John Muir once wrote: "When we try to pick out anything by itself, we find it hitched to everything else in the Universe."[10]

Life is like the soil and the only way to examine its potential is by reflecting as much as you can the quality of your journey. I was not born with the best psychological soil to work from in connecting with a deeper appreciation for nature but have remained tenaciously close to my heart, experiencing a wide mix of life affirming choices to become who I want to be.

As the soils disappear throughout the planet, so do our life forces to reconnect with the web of life. I was ready to do my part to keep both processes alive in the world. But then I discovered that Schaumburg, like most towns and parts in rural America, had been taken over by transnational corporations and sprawling corporate franchises where Mom and Pop businesses were becoming forgotten memories to the community. I was in the heart of the commercial dragon where land no longer played a critical part reflecting the intricate living systems of the planet by a detached anthropocentric notion that most of the important work occurred indoors.

2

What's Done Can Be Undone

For thousands of years, people from indigenous cultures for the most part have used the earth with its ecological relationships intact as their primary metaphor for developing ideas on how to live. The loss of such an affinity with the land is profound. No longer do people see the vital connections to where we receive our food, water, medicines and other resources, nor do we experience a deeper gratitude in reciprocating what we receive from Mother Earth. One would be astounded to discover how the first peoples used the diverse expanse of the prairie, woodlands and wetlands to cultivate a balanced way of living.[1]

Americans on average spend 40 percent of their adult life preoccupied in their work environment, mostly operating inside closed walls. In most cases, the place of employment offers very little opportunity to find contemplative retreats reflecting our state's natural heritage. But if a major company in the heart of corporate America decides to enhance and restore native plant communities within a large portion of its property, an unprecedented and exciting workable partnership emerges between ecology and commerce. Such a site exists in Hoffman Estates, Illinois. Prairie Stone, is a carefully planned, 780-acre zoned business park developed with close consultation from ecologists at the Morton Arboretum in Lisle, the Nature Conservancy in Chicago and Wetlands Research, Inc. in Wadsworth. Sears, Roebuck and Company is the parent company to this property. More than 150 species of prairie forbs, sedges, grasses and wildflowers thrive on this business development.[2]

With the intention of conservation land ethics, their plan is to reduce or avoid mowing grass, apply prescribed prairie burns, eliminate the need for irrigation, fertilizers, pesticides and herbicides, reduce downstream flooding and improve air and water quality, thus creating an ecologically sustainable landscape. Workers and visitors are drawn to enjoy an aesthetically diverse richness of an extensive prairie or wetlands. Taking a break from corporate demanding stresses and wandering the continuum of a

prairie and wetlands within walking distance eases the mind and body to benefit greatly in returning back to work clear headed and reinvigorated.

As a precursor and prototype for communities applying ecological landscapes for residential living is Prairie Crossing in Grayslake, Illinois. One of the first large developments in the early 1990s that proved developing in harmony with the land could be beneficial both for the pocketbook and bringing nature back, Prairie Crossing changed the paradigm of suburban development. Instead of carving up a century-old farm into cookie cutter house lots and streets, this intentional upper middle class community development restored the native prairie and the original barn, started a 100 acre organic farm, and engineered a natural approach to storm water management, all while accommodating 100s of new high performance, energy efficient homes, prairie bike paths and pedestrian trails, and an award winning, ecology friendly school along with new condominiums, stores, and transit stations.[3]

Prairie Crossing proved that developers and environmentalists could find common ground. It also proved that it was possible for a new community to work with nature, not against it. Prairie Crossing is a landmark community not only because it saved open space, reduced infrastructure costs, increased property values, fostered sustainable agriculture and preserved rural character, but also because it has spawned a new generation of families and children living in harmony with the land.

Coming to Terms with How Communities Separate Themselves from Nature

Knowing how outstanding local examples could be presented to state the case for ecologically applied natural landscaping, I wanted to reach out to the greater community to apply a restored land bio-ethics approach adapted from Spring Valley Nature Sanctuary, Prairie Stone Park, and Prairie Crossing. My first attempt was a midrise condominium association built in the early 1970s called Bar Harbor. I used to explore the natural pockets of the town as a teenager. Among my ventures was a wetland marsh pond teeming with fresh water fish I could see with filtered clarity from the cattail-sedge-rush shore sourced from a clear running creek. Now called Willow Pond these wetlands became a product of a reconstructed high maintenance, chemically induced pollution driven lawn, and a retention pond inviting Canada geese to thrive among a multi-acreage domain of mowed Kentucky blue grass and other non-native turf grass.

Once migratory in nature, Canada geese no longer needed to struggle along their migratory routes traveled for thousands of years, but now

were permanent residents to dwell among the vast, constantly manicured grounds and open sterile ponds throughout the town. People complain constantly about these family oriented water fowl with their endless droppings and territorial standoffs, but who is to blame for their permanent presence?

The landscapes were dramatically shifting into an expansive course of chemically driven lawn, requiring gas guzzling lawn mowers to maintain a green monoculture terrain. These high-flying V formation wonders use to migrate seasonally during the spring and fall when the cornfields were a part of the town's land. Now, these smart, gregarious birds are not driven to fly north to breed and raise their young in hostile predatory habitats only to be hunted by humans, foxes, bobcats, lynx, snowy owls or wolves but prefer to resourcefully stay put and feed among the endless sea of freshly cut lawns.

The shoreline was completely surrounded by a gravel border with no sign of emergent vegetation. No longer were there cattails to filter the incoming flow of stream water but chemicals like copper sulfate permeated

A condominium landscape called Bar Harbor in Schaumburg, Illinois, embedded in pollution driven resources to maintain a sterile natural world chemically dependent on maintaining lawn. Canada geese are drawn to tundra like conditions removed from any tall wetland buffering vegetation agitating an already stressed out despoiled environment. Photograph taken in 1989.

the water. Knowing how this land erased any remnants of a diverse wetland community, I phoned the president of the homeowners' association and asked if I could come by to present my case to the management and board for restoring this open residential landscape. With the nature center backed up to their property, and harking back to a time when I used to walk around this area when it was a functionally diverse, self-regulating wetland, I felt this was a perfect opportunity to show how land could be restored and beautified with enough ecological knowledge, practical application, and long-term commitment. Unfortunately, we did not hit it off from the get go. My proposal to present a complete overhaul of the pond area was slammed.

"There is nothing you could do about it. What's done is done!" he exclaimed to show his total resistance to this idea. I could not believe my request could strike such an upsetting vocal resignation as this man who surrendered all hope for introducing any ecological repair on the land.

A short time later, I received a call by the manager of my nature center. She knew how much I was disheartened by the rampant commercial and residential growth of Schaumburg impacting wildlife. Marshes, meadows, forests, and other open spaces, where red tail hawks once nested in trees surrounded by corn fields, and white-tailed deer following secluded scented trails, were no longer present. Now, in the late 1980s, much of the town was ignoring the natural heritage of what made this evolutionary piece of the planet special. She said, "Dennis, I attended a park district meeting last night and someone had mentioned that the Village of Schaumburg is planning to soon convert some wetlands by the library into a playground. Please do not speak to anyone that I told you about this as I might get in trouble." I knew this marsh well when the waters flowed through a sedge meadow fen but now it was subject to a complete eradication. Thousands of years of peat buildup, wildlife habitat and nurturing zones of distinct wetland vegetation were threatened to disappear at the mega scoops of the bulldozers and unecologically trained town planning engineers.

The next day I barged into a government office trailer where two gentlemen were going over some blue print development plans and in a fiery tirade, as if I were the Lorax reincarnate, cried out, "Why is there going to be a playground built over a wetlands that deserves to be protected? Can't you find another open space and put it there? Does another natural area have to be sacrificed? There is a flowing sedge meadow fen going into this marsh. I used to hang out there as a teenager just to find a peaceful place to be. Installing swings, slides, a merry go round, and removing these wetlands to be replaced by lawn and gravel pond borders are not a good use for preserving this precious natural area!"

They looked back at me. One of the administrators said, "We agree with you but this is not the Village. We are with the Schaumburg Park District." I was embarrassed! I had given this once in a lifetime, heartfelt speech to the people I work for, not the city to whom it was directed. I eventually did manage to get a hold of Mayor Al Larson to explain to him how the town was devolving in terms of setting aside habitat friendly natural areas. As a lover for nature, he thought a number of natural areas within a continuum known as Sarah's Grove have been preserved including an old growth hickory oak forest in a local subdivision, a retirement village, and a marsh behind a U.S. Post Office, and that according to the town's planning director preserving the site in question would be difficult because the residents of the neighboring subdivision prefer a park playground for their children within walking distance from their homes. Then, the mayor stood his ground, claiming the town had done more good than any other suburban community in efforts to preserve open space, woodlands and wetlands. The area in question, he said, was set aside as a "commercial district" subject to development.

I had to do something to change his position. I decided to go door to door around the community with a couple of my former neighbors to encourage the neighborhood to establish a local wetlands park there. The response was fairly negative with most of the residents claiming "good riddance to that wretched mosquito infested dumping ground swamp that only attracts derelicts, drug abusers and drunks. Even a dead horse was found in the muck of that marsh." People generally preferred to have a safe area stripped away from any wetlands remnants, replaced with an open pond, uniformed gravel borders, an extensive sod landscape, and a playground. Disheartened, I was about to concede.

Then one night I received a call from a woman who claimed to be Maggie Atcher, the wife of the acclaimed Bob Atcher. As a key figure in establishing the world's largest shopping mall but who also worked with Ellsworth Meineke on establishing open space natural parks, he was the mayor of Schaumburg in the 1970s and was also known throughout the area as a popular country singer.[4] "This is Maggie Atcher and I am on a committee that looks into areas we could consider setting aside as protected natural areas. I was told by the mayor that you are concerned about a wetlands that is subject for review by the Village to be considered for a future playground."

"What do you want me to do?" she asked.

Maggie agreed to talk to the mayor who talked to the review planning committee, requesting a delay. They gave me roughly a month to come up with an alternative plan for this proposed playground. I was fired up but not sure who would provide the turning point for this project.

Working at Spring Valley as an assistant interpretive naturalist I became more aware of highly regarded professionals in the field who mastered northeastern Illinois native plants with a deep ecological understanding. One of them was a prominent taxonomist working at the acclaimed Morton Arboretum who co-authored with the renowned botanist Floyd Swink what I considered to be the "bible of this region's native plant collection" titled *The Plants of the Chicago Region*.[5] I decided to call Dr. Gerould Wilhelm in early June and asked him to perform a plant survey on the site in question. I told him the marsh pond encompassed about three acres and needed to be surveyed soon. Within two weeks he arrived in a safari like outfit at the parking lot of Spring Valley Nature Sanctuary where we drove together in his car to the site. With his reliable mono-focal in his shirt pocket, he would constantly pull it out and look with the most enthusiastic detailed glee at one sedge or rush species after another articulately proclaiming its identification in Latin.

Native sedges host many species of butterflies, including eyed brown (Satyrodes eurydice), dion skipper (Euphyes dion) and eastern dun skipper (Euphyes ruricola metacomet) found in fens and swamps. Sedges host grasshoppers and other interesting and beneficial insects including leafhoppers, leaf beetles, and spittlebug nymphs. The seeds attract many kinds of birds like mallards, wood ducks, sora rails, pintails, and song birds (house finch, juncos, song sparrows and towhees).

We slowly walked around the marsh which at one time had been a fen that early summer morning and when the survey was complete, he tallied up over 120 native plant species including grasses, sedges, rushes, forbs, trees, and shrubs. Finally, he said something that changed the fate of this wetlands.

"Dennis, you have a brick for a foundation. Whatever you do, you must try to preserve this area. Is there anything I can do to help you?"

"Yes," I said. "Could you please write up a recommended report to preserve this wetland along with a comprehensive plant list and submit it to the Village of Schaumburg via the mayor and the planning review committee?"

He most graciously agreed and the rest is "natural" history for in 1990 Olde Schaumburg Centre Park was established as a three-acre wetland/wildlife preserve consisting of an active, ecologically applied program involving restoration of native plant communities, removal of non-native plants, a walkway, observation deck, interpretive signage, gazebo, a bird sanctuary island, and periodic prescribed burns.[6] This commitment would last for decades, costing hundreds of thousands of dollars through community block grants, and is still as strong as ever today. The park continues to add and restore structures and interpretive signage, apply prescribed burns

every few years, remove invasive trees and plants, and introduce added native wetland, woodland and wet prairie conditions around a dredged pond. I would eventually adopt this protected natural area as a volunteer, broadcasting native seeds collected from various wet prairie native gardens for several years grown at Town Square Condominium Association.

I was directly involved in the making of this park and felt so proud that my town took the initiative to do the "right ecological thing."

Olde Schaumburg Park is small in scale, yet is a conscientiously balanced, ongoing, exemplary effort in preserving the town's natural and cultural history. It initiated a wonderful model of how a town can introduce nature's design for controlling floods; more importantly this wetlands park sends a message, as mentioned in the leaflet circulated at the opening ceremony, to other communities and neighborhoods that in the words of noted Aldo Leopold, "a thing is right when it preserves the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise."[7]

Inspirational stories about saving wetlands through private, Federal,

Through a $375,000 community development block grant, support from the mayor and the village trustees to preserve this natural three-acre area, the Village of Schaumburg established a wetland/wildlife preserve and my life changed forever.

state and local help were popping up in the news. One not too far away from home in northeastern Illinois was a government and private funded 550-acre site of the Des Plaines River Wetlands Demonstration Project which channeled a contaminated river through a two mile stretch of various meandering wetland stations to filter the water.[8]

Before the Des Plaines swamps were drained in the 19th century and the land converted to agricultural uses, the wetlands provided flood and pollution control much thanks to the beavers damming up the rivers and streams to create extensive beneficial habitats. A quarter of Illinois, or more than nine million acres, was once wetlands but by the early 1900s especially with the removal of the beavers, virtually all of Illinois' wetlands were drained.

As an ecological laboratory, the project allows the swamp and its grasses to naturally control the flow of pollution creating an area reflective of when Native Americans inhabited the land. Ecologists, landscape architects, hydrologists, microbiologists, geologists, soil scientists, and a host of others are collaborating as a living laboratory with the conditions to understand how best, and at what cost, wetlands can be reconstructed.

Experiments around the country are bringing in new data every day about the ability of wetlands to absorb and contain phosphorus and nitrogen, and even heavy metals. The reconstructed wetland on the Des Plaines will provide water quality benefits but, more than that, it will add to the increasing body of data on what those benefits are.

Natural landscaping through restoring ecosystems is projected to save the Metropolitan Water Reclamation District of Chicago thousands of dollars per year compared with the turf that is being replaced. Instead of spreading a large expanse of lawn on public property, copious quantities of prairie and wetland forbs and native grasses are introduced to invest in a landscape reflective of a regional ecologically applied character.

Addressing Eco-Illiteracy

All across this land once immense in tall grass prairies, countless wetlands and impressive woodlands, ecosystems are vanishing and people are losing touch with the incredibly rich value of the native plant communities. So how can we care about the incredible loss of our precious natural worlds if we have been raised as cultural illiterates with nature?

Two immediate examples to this perplexing problem come to mind. Once I had a candid conversation with a long-established developer about saving the understory of a large hickory oak forest in a northern Illinois suburb, Hoffman Estates. He expressed little regrets in amiably saying that

his company had no intention of keeping any of the woodland wildflowers and forbs or any established native trees for that matter if these mostly unfamiliar plants to him interfered with the building plans. That included endangered species plants too. Could such an open admission of expressing no remorse for the potential loss of these native woodlands stem from his ecological illiteracy in not reading the significant earth's language on his commercial development reinforced by a bottom-line culture that considers nature as simply a profitable extracting resource?

In another instance, a parent volunteer in Schaumburg helped create a small prairie plot as a school project. Located in front of the school's main entrance for all to see and proudly appreciate, a variety of tall grass prairie flowers and grasses were introduced with care and left for other future mid-level elementary school students to nurture and enhance. A couple years later, after the prairie plants were beginning to dig their deep roots into the little highly visible native earth plot, school district administrators attending a meeting at this school found the plants to appear "weedy" and asked the principal to consider removing this "eyesore" to the community. The plants were removed with a few of them transplanted ironically just a football field length away to a local wet prairie plot along an extensive cattail marsh. The quaint compact plot where all the students, staff and visitors could see and admire the heritage prairie garden before entering the school is now blacktopped.

No matter how educated people might be, if we cannot read the valuable ecological messages of evolutionary knowledge stored in our own community, then how does nature gain respect and understanding to be an acceptable part of the culture?

A Conservation Milestone Breaks the Barrier in Transplanting Threatened Prairies

I stood alone in the early summer twilight viewing a herd of white tailed deer quietly move across a distant cornfield on an ancient hill nurtured with glacial debris and could not believe the immense diversity of undisturbed native plants organized over centuries through the four seasons adapted to fluctuating temperatures, light, soil, moisture, drought and wildlife. The beautifully charming shooting stars by the thousands were on the north slope, wild pasture roses blanketed the south slope. Soon that 10,000-year-old kame called the Healy Road Prairie in Hoffman Estates would be subject to a major excavation by a local mining company extracting gravel beneath the torn prairie fabric. The sun was setting. Tears of sadness and quiet anger chilled my moment. In two weeks it would be

all gone, scattered to the extracting industries that needed to make a buck at the expense of Mother Earth.

But that one-acre swath of virgin prairie would not be forgotten. Despite not raising enough funds to purchase the land the Nature Conservancy along with 325 volunteers led by organizer Stephan Packard and some bulldozers did a feat that will forever be remembered as a conservation milestone. With the consent of the owner they devoted an entire weekend relocating the surface of the prairie with a healthy removal of

Is our modern urban-suburban society stripped from ecological settings moving essentially toward respecting local natural history in catchy signs related to streets and real estate development?

prairie soil, stock and root. Then they trucked the prairie a few miles to a preserve called Bluff Spring Fen outside of Elgin, Illinois, adjacent to an historic cemetery bringing leadplant, flowering spurge, blazing star, short green milkweed, panic grass, bastard toadflax, porcupine grass, and scores of other native species to a new living spot where they could dig their roots down deep into a trusting land for many generations. Rescuing the prairie also involved netting rare beetles, wasps, butterflies, and parasites not to mention the infinite beneficial tiny soil organisms. One hundred species of native plants and 1,000 animal species were removed. It was the story of the year 1990 among those preservationists and nature lovers in the Chicagoland area. I was to witness and participate in this benevolent act of local humanity, propelling an unprecedented heartfelt conservation movement in the region.[9]

To be harmonious with our place in the planet, our readings of nature must accurately convey ourselves as the embodiment of the Earth's relationships and make us relate to them. But first we as living inter-generational members of the earth need to acknowledge that as the planet's temporary guests, we are still suffering from a grand denial of illiteracy with the "living library." We as individuals may not understand and know every ecosystem in the biosphere, just like we as individuals may not choose to read every book in the library, but we must collectively learn to keep these highly interdependent living systems like breathing books preserved and protected for future generations.

"What's done is done" did not have to be the conventionally resigned mindset for accepting the state of Mother Earth's damaged, living, interwoven fabric. With enough community cooperation among professional ecologists/environmental educators, developers, municipalities, schools, and businesses to recognize the need for establishing places that incorporate natural restoration education with passive recreational ecological pleasure, "it can be undone!"

3

Bringing a Vision Home

In 1989 I moved to a fairly rundown residential complex called Town Square Condominium Association. Once a thriving marshland surrounded by wet meadows and underground streams, the land was forever altered by an incipient suburban growth. Surrounded by a once thriving little ghost town shopping center with a broken down pot hole parking lot and a chain linked fenced off area teeming with domesticated ducks and geese in an open, degraded muddy pond, this abandoned location became a magnet for exchanging illegal drugs, scavenging gulls and rodents of many sizes. Sometimes that abandoned wasteland carried over into both condo buildings of Town Square drawing drug traffickers and homeless people to stay warm and out of sight of police.

With its 240-unit, five-story buildings, a swimming pool, a parking lot covering about five acres, an island hill of mature white pines where dogs were allowed to litter on the property, typical bordered shrubs like bush honeysuckles and forsythias, and a monoculture of turf grass with several shaded mature ash trees and pines scattered on an additional five acres, moving there was at first disheartening and pretty depressing. I struggled as an outdoor nature lover living in such a sterile, impersonal, structurally neglected suburban complex where commuters barely talked to each other. But the short distance to and from work was ideal, allowing me to easily commute by bicycle through spring, summer and fall.

As it turned out, what was missing proved to be what I had been waiting to unfold as a passionate calling. After having an amazing successful turnaround in establishing Old Schaumburg Park as a designated wetlands preserve and discretely planting inconspicuous native plants around my residential condominium without complaints, I began envisioning the condo property as a possible place to convert the landscape into a living community for nature and people to co-exist. But I wanted to nurture this transformation of the lawn into a well thought out prototype, showcasing

native eco-gardens and micro-habitats supported by residents, management and the board.

Finding Intact Habitats and Ecosystems to Micro Mimic on the Condominium Property

As I became more familiar with exemplary, healthy, northern Illinois restored forested communities, I discovered an awe-inspiring DuPage County forest preserve noted for spring wildflowers, called Meacham Grove, in Bloomingdale. The area west of Bloomingdale-Roselle Road, which is also a designated state nature preserve, has the largest populations of red and white trilliums in the county and perhaps the state, along with a remarkably diverse understory. I was enthralled by the blanket of wildflowers and sedges surrounding the oaks, hickories, and sugar maples

A visit to Meacham Woods Wildflower Preserve helped me understand how to mimic understory plants around the woodland ash grove. This stunning display of white trilliums demonstrates that well-drained soil is rich, damp, and organically layered with maple and oak leaves to allow rhizomes to spread throughout the forest.

and wondered what an astonishing resourceful living library of beauty and diversity the Potawatomis must have encountered before the Europeans arrived. I expanded that search to learn from the local natural history of Illinois by seeking solace at an intact understory oak savanna, Poplar Creek Woods and Shoe Factory Road Prairie in Hoffman Estates, both locations covering hundreds of acres of vibrant well managed natural living history.

I was drawn to the open sky upland prairie there so I would occasionally visit a preserved kame dating back over 10,000 years as a result of glacial deposits forming a unique ecosystem of a dry mesic gravel prairie. On that hill I would sit on a solitary glacial erratic, viewing a magnificent continuum of prairie and woodlands carefully managed by volunteer stewards and the Cook County forest preserve.

Over 100 prairie plant species have been identified at this site, including the prairie bush clover and woolly milkweed. On the more protected east-facing slope, a woodland community dominated by mature bur oak exists. This preserve is responding well to management efforts

On the Shoe Factory Road hill prairie I would sit on a lone glacial erratic and contemplate the world and personal issues, viewing a magnificent continuum of prairie and woodlands. Often I wondered if such a natural world could be mimicked on condominium land.

(e.g., prescribed burns, brush cutting) and is a cornerstone of an adjacent 600-acre prairie and oak savanna restoration effort sponsored jointly by the Forest Preserve District of Cook County and the Nature Conservancy. I studied these plant communities and volunteered for a few seasons to work with other knowledgeable stewards finding camaraderie and joy in weaving an ecosystem that feeds into our collective spirit for a healthier planet and a personal well-being.

Other natural preserves around northeastern Illinois and into Wisconsin I would visit with my mother, usually every Friday after my father passed away. We would catch up on our lives, share feelings of gratitude and love for what we have and hike in some of the most impressive protected natural areas the state has to offer, like the oak savanna Eastern bluebird habitat of Poplar Creek Woods, the dry sand prairie of Illinois Beach State Park (North Unit), the beautiful Virginia blue bell rich understory in the oak-hickory woodlands of Reed Turner Woods in Long

Off in the distance a new impressive library and smart growth development appears, inviting a vision of building a natural landscape to reflect this added improvement to the community. Past empty gardens around the green ash trees are bordered by faded, inserted tacky plastic garden edge guards with a backdrop of rolling berms of lawn nudging a vision to change the bleak landscape of living there.

Grove, the magnificent tall grass splendor of Nachusa Grasslands outside Rochelle where bison roam, the incredible plant diversity of 400 native species including the Eastern white fringed orchid at the Chiwaukee Prairie along the Lake Michigan shore bordering Illinois and Wisconsin, the preserved tapestry of mosaic marshes, lakes, prairies, bogs, woodland hills and streams of Moraine Hills State Park in McHenry, and the mineral spring fed, multi-habitat Bluff Spring Fen, home to over 440 native plant species close to Elgin.

If I could begin to mimic those grand and little understory pockets of ecological integrity around a grove of green ash trees just below my fourth-floor housing unit then I could feel more connected to a deeper sense of place by my residential home. Later, I might create dry mesic prairies on the open sun exposed berms throughout the property. But how was I to convince the condominium management and the board that such a vision would benefit them?

Looking north right outside my fourth-floor condo window at this grove, I envisioned the terrain with native eco-gardens encircling the green ashes. Introducing a perpetual unfolding of multi-seasonal perennials around each of these trees would regenerate a forgotten living landscape. About 150 residents on the entire north side of the condo would be able to enjoy the changing of the seasons through these glorious understory displays reflecting Illinois flora and fauna. But who would pay for such a vision? Knowing that such an effort would meet some resistance and that I really wanted to make this long-term vision successful, I started small.

Starting Small

Surrounding each ash tree was a thin, embedded strip of weathered hard black plastic serving as a bordered garden bed. That is where I would begin, but considering budget constraints, where could I go to get such appropriate native plants for free? Management was open to installing the native plants but only if they were donated or rescued. These are the sort of simple roadblocks that face every would-be restorer of native plants in fields throughout the U.S. today.

Research at my nature center's library revealed a wildflower rescue organization called The Wild Ones, a national not-for-profit organization with local chapters that teaches about the many benefits of growing native wildflowers in people's yards. They are proactive in rescuing native plants before the developer's bulldozers smooth out new suburban homes. Additionally, they try to provide alternatives to mowing lawns,

establishing landscapes that are healthy, safe and chemical free, not consumers of enormous amounts of water and energy. But their overall push for ecological change is to promote biodiversity, working with nature instead of fighting against it, promoting gardens and landscapes that are beautiful and healing to the human spirit throughout the seasons.

I met up with a few people involved in rescuing a woodland wildflower community in Rolling Meadows. A large home estate was about to be constructed in an established hickory oak forest but a wildflower rescue alert was announced and so I jumped on these fragile, home seeking freebies after receiving a call from a Wild Ones hotline office. One volunteer, Mary Handelsman, was a wonderful contact for knowing where the next wildflower rescue spot would be. Out of the Barrington area, a prominent woodland preserve, Reed-Turner Woods was widening a driveway entrance which provided a rich selection of rescued sedges, grasses and forbs to bring back to my condominium complex.

After a few weeks of traveling around Cook County, I was able to collect enough plants to spread around 24 mature green ashes. With the help of a couple of resident older gentlemen and a handful of younger children, I began one lovely sunny morning on Earth Day April 26, 1998, to transplant these orphaned perennials: spring beauties, white and red trilliums, Pennsylvania sedges, Virginia blue bells, Mayapples, common violets, toothwort, trout lilies, wild geraniums, Canada anemone, alumroot, nodding wild onion, woodland bromes, and bottlebrush grass. Planting the salvaged soil with the plants certainly provided a healthier familiar boost for them but by no means a safe haven. Much of the challenge dealt with "critters of all sizes and mouths" such as eastern cottontails, voles, skunks, squirrels and last but not least, Canada geese. Nevertheless, that was an unforgettable inter-generational day when a handful of old and young helpers came together initiating a beautiful little beginning, kneeling for natives, entering pretty unknown territory, planting together in a stewardship way you just do not see on residential complexes.

A decade later just to fill the barren spots around the condo property, and with permission from the condo association, I would continue to incessantly go about digging up and transplanting with a hand shovel and plastic bags native wildflowers and soil rescued from the local developer's bulldozer before stripping away forested understory in preparation for a new development. My love for nature drove me to go beyond the rules of the association, spreading pockets of small wonder that neighbors barely noticed. Within a few years of additionally planting hundreds of native flowers and grasses from two $500 grants received from the North Cook County Soil and Water Conservation District, the landscape was awakening with promising diverse pockets of wild heritage flora.

A young boy sprinkles water over the newly-born native woodland garden with added mulch to begin starting small on an idea that grew over time to heal the land once forgotten.

It wasn't just the condominium that was dramatically changing the face of the landscape. A block away in that once neglected shopping center vacant lot a new smart growth development was unfolding. Gone were all the rundown remnants of a commercial dead zone. A grand library, second largest in the state, using a designed architectural plan by Frank Lloyd Wright was under construction along with a lovely entertainment amphitheater next to an active fountain pond, small shops, seasonally changing perennial gardens, a contemporary Native American run museum with a spring, summer, fall weekly farmer's market, and a large food store all within just a few hundred feet from the Town Square condo property line.

Between the wetlands preserve and the condominium complex was a newly pronounced 19th-century historic district called Town Square Center. The once ghost town shopping mall was transforming into a pleasant place for people to meet and enjoy the aesthetic settings of a north woods waterfalls garden, sloped landscapes of seasonally changing perennial wildflowers, an amphitheater for outdoor concerts, with natural limestone formations around landscapes and water for kids to walk on and adults to sit. Schaumburg was creating a smart growth epicenter to help weave a greater thoughtfully designed community in the town. And we were right next door to feed off of this awakening, rippling upgrade.

How to Keep the Critters Out Without Hurting Them

As the native eco-gardens began to spread around the ash trees, local wildlife began to devour the newly introduced transplants. Signs of snips and dug up plants made it apparent that the wildlife, although small in numbers and size, were beginning to enjoy a new diet that barely was getting started. Not wanting to apply pesticides or lethal animal traps as an effective yet compromising deterrent, I nevertheless needed to do something quick or this embryonic benevolent restoration effort on the land would collapse.

Knowing that the management circulated a monthly newsletter to residents, I decided to put out a bulletin. Cats were allowed in the condominium as pets. Small critters with a robust sense of smell like voles, squirrels, rabbits do not like the scent of predators so I requested in the newsletter for the residents to donate as much cat hair as possible and drop the bags off at the management office. I could not believe the response. Copious bags of cat hair lay outside the office door. The manager said the reaction was overwhelming and urged that these bags be removed to avoid incoming complaints from those allergic to cats.

I went to a local hardware store and purchased giant hefty bags and six 14-ounce containers of powdered cayenne pepper, poured the entire amount of pepper in a giant hefty bag of collected cat fur, shook it up, and spread it around the eco-gardens. A significant turnaround had appeared. The snips and yanked roots on the flowers were gone except the grasses and sedges were still being damaged by critters. After observing through my fourth-floor window for a few days I noticed a new ominous family of invaders yanking out the plants: Canada geese. Knowing that I had to move fast on resolving this incursion, I found an organic non-lethal substance containing rotten grape juice in the hardware store and purchased a pump to spread the solution on all the stunted native grasses and sedges. Within days families of geese were not yanking the plants but moving on to tug on Kentucky blue grass and fescues sprouting up on the residential lawn.

In his land ethic classic, *A Sand County Almanac*, conservationist Aldo Leopold wrote, "Once touching water, our newly arrived guests set off a honking and splashing that shakes the last thought of winter out of the brittle cattails. Our geese are home again."[1]

Leopold wrote this decades before Canada geese decided to become permanent residents in Illinois, rather than historic migratory transients. But something dramatic has been unfolding lately with these tenacious,

family-oriented, once grand traveling birds who used to stock up on Illinois corn and head north to the Arctic tundra to raise goslings. They are staying by the hundreds of thousands as permanent residents. The ongoing brouhaha concerning the fine feathered fate of Canada geese (Branta canadensis) probably could have been avoided years ago if only we as a greater community had taken the time to weigh the ecological and economic consequences of our region's landscape practices to these webbed feet intruders.

Within a generation, the landscape of this temperate zone underwent tremendous changes. Corn fields disappeared, replaced by expansive commercial and residential lawns, open ponds, and few trees. Gone were the intimidating tall grasslands which prevented the geese from permanently residing, knowing that such conditions would not be conducive to raising a family with predators potentially hiding in the brush. In short, a perfect habitat was established for Canada geese to remain. They feel right at home in human constructed manicured worlds (golf courses, city parks, corporate terrain, schools, park districts or any large tract of mowed landscape that mimic tundra-like images of their ancient homeland up North). Why should they leave? It is in their biological make up to stay. Avoiding the hard, long journey flight with their extended families, not confronting predatory wolves, foxes, eagles, ravens, and bears, survival is much more inviting within tamed wide open suburban sodded landscapes.

At the 139 acres Spring Valley Nature Sanctuary, I learned that Canada geese are rarely seen once the tall prairie grasses, high stands of shoreline vegetation, spreading trees and shrubs edging the marsh, pond and streams establish themselves for the summer. Considering the spring rains would periodically wash away the applied repellents, I asked the management for board approval if I could install a fortress around each eco-garden. My proposal was to purchase eight hundred 2-inch-by-19-inch cylindrical cedar pegs and sledge pound each one into the ground circling each tree as a protective guard for the gardens.

After completing fortresses around 24 ash trees, the plants were well protected and showed a remarkable leap of adapting well to their new homes. As if a micro-climate had been created preserving the temperature, buffering direct wind exposure, while keeping wildlife out, the gardens began to thrive. Over time I began to add a continuous unfolding of diverse multi-seasonal perennials, creating layers of landscape micro-mimicking much of what the understory woodlands in the area possessed before settlers arrived in the early 1800s with their cultural prejudices against nature for living off the land.

More than 800 cedar pegs were pounded around 22 ash trees to keep the rabbits, Canada geese and the hired-out landscapers with power mowers from damaging the gardens.

The idea of building on this vision needed to be constantly promoted or the residents might wonder what ghastly changes on the grounds could be ominously enveloping out their windows. There were two ways that kept me accountable and informative. First, I began to serve on the Board so that anyone wanting to approach me about this transformative landscape could inquire openly at meetings. Granted I could not vote on my behalf for any budgetary issues over this project for it would be considered a conflict of interest, I still was in a direct position to continuously convey to the board issues and proposed projects with accountability, transparency and clarification.

After two years of successfully fortressing off the woodland ecogardens from critters and the onslaught of mowing landscapers, the board recommended that the 800 cedar pegs be removed. I was at first reluctant, thinking another growing season or two would allow these vulnerable gardens to mesh more successfully with each other, but began to realize another scenario more visionary in scope.

Making Sure the Native Plants Are Allowed to Expand Around the Ash Trees While Generating Low Maintenance, Self-Regulating Outcomes

When the pegs were removed, the hired-out landscapers tended to cut right into the vulnerable edges of these now fenceless, five-foot diameter gardens and infuriate me. After explaining to the workers and company owner to not cut into these ill-defined borders, I insisted they stay at least a foot away from the edge. That way I knew the plants would not be damaged. More importantly, by allowing a foot buffer zone around all these gardens, the native plants were expanding outward. What was once a five-foot diameter around the trees now were expanding from 12 to 16 feet in diameter over the years, becoming impressive micro-habitat gardens.

Once established, the eco-gardens teeming with Virginia blue bells and Penn Sedges began to expand outward after the cedar pegs were removed, creating a multi-seasonal micro-native plant community. Landscapers were told not to cut within one foot of the gardens thus allowing each year for the plants to move outward.

Rarely needing watering and applying herbicides, these gardens, while not removing the leaf litter for mulch, made the Board appreciate the low maintenance outcome. Hardier to the climate, requiring just a few inches of mixed peat woodland soil and more adaptable than many exotics pampered to endure the seasons, native woodland grasses, forbs and sedges are more likely to be eaten by a much more broader range of insects, mammals, and birds than a plant far from its native land. No need to fertilize, add peat, mulch or water due to leaf litter retaining moisture, plants become well hydrated even during drier periods.

As I constantly kneeled by these "strange growing novel gardens" (in the eyes of most residents) amidst a rich mix of planted forgotten heritage treasures, I constantly weeded the two most notorious soil depleting invaders known to the native residential gardener: garlic mustard (Alliaria petiolata) and the aggressive ground cover creeping charlie (Glechoma hederacea). Yanking out these two spreading threats when the soil was damp was the easiest means for removing them, especially before they went to seed. With an early intervention both plant species have very shallow roots and can be extracted without stretching your back.

Vision of Bringing Natives Home Begins to Unfold

Once the word spread through media attention and motivational talks that I was bringing a healthier more diverse approach to gardening, reflecting Illinois' natural history to a condominium association, people began to see the vision of a landscape, nicknaming me "the flower guy." However, my interest was far from planting daffodils, tulips, begonias or petunias but rather installing low maintenance plants to create vibrant new settings to make the landscape wondrous and ecologically beneficial. Native plants produce such a long term, ecologically inclusive conservation practice. When alluding to native plants I wish to use master natural landscaper/photographer Rick Darke and noted entomologist and native plant expert Professor Doug Tallamy's concise definition of what encompasses such a desirable landscape direction: "Native is a plant or an animal that has evolved in a given place over a period of time sufficient to develop complex and essential relationships with both the physical environment and other organisms in a given community."[2]

Such new transplants as they unfolded through the seasons and the years included spring beauty, Virginia blue bells, white trout lilies, sharp lobed hepatica, bloodroot, Pennsylvania sedge, Jacob's Ladders, Dutchman breeches, May apples, wild geraniums, alumroot, shooting stars,

wild columbine, white trilliums, red trilliums, common violets, Celandine poppy, wild nodding onion, lady ferns, ostrich fern, sweet cicely, Virginia creeper, starry Solomon seal, false Solomon seal, Solomon Seal, purple flowering raspberry, foxglove beardtongue, wood anemone, purple coneflower, royal catchfly, wild bergamot, tall meadow rue, black-eyed Susans,

Mayapples, tall meadow rue, hollow Joe Pye weed, and alumroot highlight the open woodland gardens surrounding scattered green ash trees in the late spring.

grey headed coneflowers, woodlands sunflowers, smooth blue asters, sky blue asters, hollow stemmed Joe Pye weed, and Drummond's aster.

Lifting the pegs in the early spring allowed me to expand the woodland eco-gardens, adding more to the indigenous blend. One of the board members mentioned that his mother had a particular wildflower aggressively enveloping her entire property in Park Ridge. When I arrived at her home with a couple of helpers I could not believe the magnitude of how many Virginia blue bells (*Mertensia virginica*) were exploding throughout her front and back yard. They completely blanketed an ethereal, illuminating blue-sky landscape around her home with hundreds of little long handled flowery bells on arching stems leaving no room for other perennial garden plants to show their spring glory. We dug up scores of these plants with dense, prolific rhizomes and introduced them around the green ash trees at the condo. These mesmerizing blue dangling bells glow in the sun and can bloom easily through early vernal snowfalls. Grown in moist, well-drained soil with a mild sun and summer shade, they tolerate extensive drought during the hotter drier times of the year. It seemed like a perfect transplant to introduce to these initially pampered gardens in search of an ecological face lift.

With permission from the District 54 Nature Center, I received several transplanted, prodigiously large shooting stars (*Dodecatheon meadia*) bordering the fence line property surprisingly in a dense invasive forest of pure, barely leafed out European buckthorn. Over the years I introduced scores of these early spring, beloved pink and white beauties around the condo property making sure there were enough survivors from the local snippers like eastern cottontails and gray squirrels. Although capable of flowering in a year or two under artificial means, the seeds when dropped in the wild might take three to five years to grow before the first blooms unfold, appearing like complex, colorfully pointed, dainty feathery badminton birdies. Eventually over undisturbed time they flourished.

Nature was beginning to unfold in many illuminating ways, igniting an added passion to keep persisting with this work in progress to bring small pockets of a regional character back to a forgotten understory forest once thriving in biodiversity, ecological integrity, and nurturing interdependence.

4

Feel the Berm

When Town Square Condominium Association began in the late 1970s, the developers decided to keep the excavated construction land for cost effective savings by installing extensive berms along the property lines, ranging from 60 to 120 feet in length and from nine to 20 feet wide and carpeted entirely in a Kentucky blue fed lawn. However, one berm in particular was located along a moderately busy four lane road where some effort was attempted to provide a conventionally designed landscape dotted with daffodils, tulips, common tansy, a few yucca plants, an American plum tree, Scotch pines, and a vast array of untended, invasive weeds.

As an upland site several feet above a neighboring sidewalk, 45 feet long and nine feet wide with bordered giant boulders nestled along each other, the berm faced east becoming an excellent location to design a landscape without building fences to keep intruders out. Having served in the Peace Corps, I knew it was crucial not to rock the boat in the tribal village with new and different ideas. As an outsider trying to fit in and learn about the culture, I needed to move slow and gain the respect and trust of the people before introducing new ideas and ways that could ultimately benefit their lives related to their traditions.

The same approach applied to the residents of the condo. I knew that by removing heart tugging flowers in their eyes such as the daffodils and tulips, the residents would be up in arms wondering why I trashed out such lovely gardens. So I slowly worked around these non-native perennials and began to add a mix of indigenous plants to fit the criteria of a mesic and dry mesic prairie. Most of these conventionally favorite flowers, not a part of the prairie, would be gone except for the aggressive common tansy weed by the time the garden climaxed with splendorous multi-seasonal mixes of native prairie plants.

Keeping the tulips around in the early spring on the berm does not interfere with the awakening of spring prairie plants. Not rocking the boat with the residents' fond affection for these cool tolerant flowers, they are left undisturbed with the burst of mesic prairie plants shortly following their blooming season. As a popular sight in the neighborhood, unknown thieves would seasonally come by and dig out the bulbs, opening up the area for more prairie plants to spread. In the 20 years of introducing native plants not one plant has ever been dug up and stolen. Another good reason for growing native plants is because unfamiliarity with these plants makes it less likely for them to be stolen.

Remembering a Dear Friend with a Heart for Remembering Illinois' Natural Heritage

My first big opportunity for kick starting this prairie berm came when I received a call from a dear friend and prominent local resident in the environmental education and elementary education fields. How many teachers do you know in your area that are naturally devoted to sharing an interest in caring for the earth and learning about rocks like they were living secrets waiting to be discovered and treasured? Not many I would venture. Ruth B. Macintyre was one of them. At the time I met her in the early 1990s she was working as a resource conservationist at the North Cook County Soil and Water Conservation District in Palatine, Illinois. Later

she had a wetlands park in Schaumburg dedicated in her name, thanks to a grant from Illinois Department of Conservation, to be managed by the Schaumburg Park District.

As a dear friend and strong admirer of her earth caring fervor, I can say unequivocally she was one of the most outstanding conservation advocates in northeastern Illinois. Besides earning an expert reputation for teaching about herbs, flowers, and rocks, Macintyre improved the quality of Schaumburg's habitat for wildlife and environmental education for decades.[1]

A junior high school science teacher for most of her 28 teaching years, she simply set up numerous innovative learning situations outdoors in order for the children to learn firsthand about their natural world. She worked 27 years in the Schaumburg Township Elementary District 54 schools before she retired in 1979.

As a science teacher at the former Blackhawk School, Macintyre defied the indoor conventions of schooling practices among her fellow teachers and gleefully created outdoor classroom settings along a nearby woodland creek.

Describing herself as a nature nut and nature recycler, Ruth earned a degree from the University of Chicago with a major in anthropology and minors in geology and botany. She loved to collect a wide variety of the purest soil samples brought up by ants from her world travels. Ruth knew the mysteries under the surface were just as important to explore and understand as what was above it. As Schaumburg's population mushroomed, she became an ever more persistent force in promoting an earth education, and was instrumental in developing the District 54 Nature Center which unfortunately later shutdown due to budgetary cutbacks and a lack of public outcry. She provided a very comprehensive list of native vegetation serving as an advisor to the Schaumburg Park District for implementing a plan to introduce them throughout Spring Valley Nature Sanctuary and other open lands in the district.

After serving on the Nature Advisory Committee for the Schaumburg Park district, she also conducted workshops on studying geology, herbs and native plants for several years at Spring Valley Nature Sanctuary. Later, she served on a conservation planning committee at her community retirement home of Friendship Village in Schaumburg, where she was successfully able to protect and preserve a hickory-oak forest remnant owned by the association.

As part of a Land Stewardship Committee she helped develop a management plan in the early 1990s to assess the native plant community at this remnant for improving and expanding the retirement community's disturbed woodland habitat with encroaching non-natives like black

locusts, garlic mustard and poison ivy. That inventory included scores of hickories and hundreds of oaks many dating back well over 200 years ago and some close to 300 years old.

When I received a call from Ruth in the late spring of 1997, she was undergoing chemotherapy for a brain tumor. Apparently, an expanded sidewalk was being planned to cut through her beloved prairie garden at the retirement community home where she lived and she asked me if I could come there to remove these plants to a safer place. Knowing that Ruth meant the world to me, I instantly jumped on it. I showed up there with a bunch of plastic bags, a few five-gallon buckets and a spade shovel.

What I saw in her fenced off diminutive 15' by 15' garden was remarkable. Compass plants, New Jersey Tea, prairie coreopsis, pale purple coneflower, shooting stars, rattlesnake master, prairie smoke, mountain mint, wild bergamot, little blue stem, garden phlox, common cinquefoil, wild strawberries, black-eyed Susans, grey headed coneflowers, wild petunias, prairie dropseed, and Culver's root. Like a mantra I remember conservationist Aldo Leopold's long lasting words "a thing is right only when it tends to preserve the integrity, stability, and beauty of the community, and the community includes the soil, water, fauna and flora as well as the people."[2] That little square spot said it all about Ruth's devotion to keeping the native plant world a part of her life. But she knew she had to give it up and allowed me to provide for these transplants a new home on a prepared runway ready for rooting down.

While Ruth was enduring her fate in bed at the hospital, I read to her a supportive article in the local papers regarding my native landscaping project at Town Square Condominium. She was weak in her voice but I heard her loud and clear. "I believe this is your calling," she said.

Ruth crossed over in mid fall of 1999 at age 86. She left me a New Mexican turquoise ring from her beloved husband Gordon which I never wore but kept and a book titled *Earth Medicine: Earth Foods: Plant Remedies, Drugs, and Natural Foods of the North American Indians* by Michael A. Wiener. There is no other person I knew personally who more reflected a community need to address the importance of nature education and conservation ethics through persevering, thoughtful actions and soft-spoken, warm humor than Ruth B. Macintyre.

When I rescued those endearing personal connections of prairie plants I knew that the berm was going to be a lasting and endearing part of my journey to highlight Illinois's native pride and joy right off a main road where people could pass by on a sidewalk every day to enjoy her utterly delightful contribution. Such a beautiful incentive to remember a noted friend's native garden with love was had. She helped me confront my true calling in life which was to kneel for natives wherever I lived.

Remembering one of the most outstanding early advocates for environmental education, conservation and preservation of natural areas in northern Illinois—my dear friend Ruth B. Macintyre. This photograph was taken at an All Species Day Earth Day event held in 1993 at District 5 Nature Center in Schaumburg. I am at left, said by our town mayor to be the "Pied Piper for the environment." The nature center is no longer around despite more than 400 native plant species reported to have been protected there, many of them rescued from other threatened areas in and around Cook County, Illinois (photograph by Mike Slawin).

Prepping a Future for the Prairie Berm

Besides timely rain, dry and mesic prairie landscapes need two fundamental conditions for regenerating and thriving: sun and seasonally appropriate prescribed burns. Scotch pines, yuccas, common tansies, and an American plum tree do not conjure images of an Illinois tall grass prairie. My first step was to remove this incongruous composition from the face of the berm. With sparing herbicide application after removing the trees, the berm became a heat magnet from direct ongoing sunshine and a promising indicator for awakening a prairie condition.

For many years I accompanied a conservation crew at Spring Valley in an ancient vernal-autumnal practice dating back over 2000 years. Scary if not handled wisely, prairie burns were ominous cyclical forces to be reckoned with wildlife and human settlements. However, by burning compressed layers of dried up dead plant materials and unleashing their nutrients for absorbing into the soil, generations of grasses, forbs, and wildflowers receive a complex blend of chemical benefits to enrich deeply inter-meshed root systems. Succession of invasive trees and shrubs were eliminated, keeping the site open to a continuous solar feeding into an ecologically receptive prairie garden. Seeing the land constantly return to a vibrant weed free healthy prairie at Spring Valley gave me enough insight and understanding that such a practice can work on the berm.

After receiving approval by management, I applied for a burn permit through the Illinois E.PA. and the Cook County Environmental Affairs,

In the early spring before the rains occur more frequently, prescribed burns are extremely effective on the mesic prairie berm especially when the charred, smooth remains of the prairie debris reflect a nutritionally darkened surface to attract the heat from the sun to trigger seeds and roots to germinate. Notice the scotch pines and Crabtree have been removed while the fading unharmed tulips have been nutritionally burnt for a new dawn on the berm.

submitting a plan with regard to location and supplies. I was amazed when our homeowners' association received approval to burn. Before burning that day, I contacted the Village of Schaumburg and the local battalion fire chief when I was planning to burn. Borrowing a water backpack, a burn flapper, and a fire proof rake from Spring Valley Nature Sanctuary, I set fire to a fuel base of raked up prairie grasses with a propane torch on a relatively calm Friday morning. The fire moved slowly and smoothly, covering the entire berm. As I was watching the final flames merge toward the middle of the site, a police car pulled into the entranceway. When the officer came out of the car, she immediately addressed her reason for being there.

"What are you doing?"

Even before the 9/11 national tragedy, such a scene close to a condominium sparked an urgent need to intervene.

"I am burning this berm as a prescribed way to manage this prairie garden," I said.

"Do you have a permit to do this?" she added.

"Not on hand but I can get it for you." I ran upstairs grabbed the folder of permits and brought them back to the officer. I explained to her the reasons for prescribed burning and that this was going to be an ongoing seasonal process to replenish these native gardens.

As she read the approved permits, she began to shake her head totally dumbfounded and said, "Well, you learn something new every day." She gave me back the permits, got into her patrol car and drove away.

Adding Signage Is a Game Changer

People driving by did not know what type of garden quickly zoomed by their view. After a few years of nurturing a dry mesic prairie minus the shrubs and trees, the board president Alan Hoffman suggested installing a customized sign to inform the public via the accessible sidewalk or those driving by that this site was a prairie garden and not a neglected, weed infested plot. The board agreed to distinctly label the sign "Native Prairie Wildflower Sanctuary." People walking by began to stop and look into the garden to see perhaps some unforeseen clusters of mixed wildflowers, colorful pollinating butterflies, a camouflaged cottontail rabbit or opossum hiding in the prairie grasses or a lovely overall interwoven composition of a prairie plant community. Cars backed up at a standstill during early morning and evening rush hour traffic had a chance to see the sign drawing them into this showy multi-seasonal arrangement of a mini-reconstructed Illinois landscape.

Right off a sidewalk by the main road media grabbing signage is installed to draw people's attention to the rich, colorful diversity of the prairie garden.

Because They Look Alien Does Not Mean They Are

During mid summer when spotty butterfly milkweed clashed with purple coneflower and clusters of prairie coreopsis in the foreground contrasted with blooming compass plant and prairie sunflowers in the background, the vibrant colors brought a halt to a lot of curious passersby. People were captivated and educated at the same time. One prolifically producing sappy plant somehow brought in by an airborne seed definitely caught the attention to the public as well as the Monarch butterflies. Unfamiliar native plants may seem so foreign looking that they may appear to be from another planet: case in point, common milkweed.

On long summer days when I was a young child in Maywood, I sought playful refuge in an unmowed field across from my house. It was there I used to create extra-terrestrial dramas, pretending to be an earthling exploring other planets with possible life, like Mars. Growing up with such sci-fi movies as *The Invasion of the Body Snatchers*, I imagined such

a scenario close to home. Alien plant spores have fallen from space and grown into large seed pods, each one capable of reproducing a duplicated replacement of each human. As each pod reaches full development, it assimilates the physical characteristics, memories, and personalities of each sleeping person placed near it; these replicates, however, are devoid of all human emotion.

The plant that grew in abundance on the berm reminded me of that creepy pod. Yet this plant is far from being regarded as an alien species in the neighborhood from another celestial body. Common milkweed can be found along roadsides where sunny dry fields prevail. Their flowers emit a powerful fragrance on hot summer days and can turn weedy fields purplish as they open and invite insects to pollinate them.

Even under disturbed soil conditions, few forces interrupt a milkweed's progress. For example: a determined gardener may yank up a persistent shoot, only to discover that the deeply buried rootstock will send up yet another or the highway crew regularly mows the milkweeds growing along the roadside, only to find them back again next time they mow.

The native perennial rootstock buried below plow level, impossible to pull up by hand and capable of spreading a little more each year, is only one reason *Asclepias syriaca* is so copious. Another is its effective method of pollination. Insects visit milkweed flowers to sip their nectar, but sometimes, when one lands to enjoy a meal, it gets a leg caught in a little trap.

The flower surface is slippery and designed to make the insect's leg slide right into a hole where two pollen sacs are hidden. If the insect manages to struggle free, it has the pollen sacs attached to its leg, and the next milkweed it visits receives the pollen. Some insects are not strong enough to free themselves, frequently losing a leg or becoming permanently entrapped. If you look closely at several milkweed flowers, you are likely to see some of these victims of the milkweed's unusual pollination method.

Since childhood I have been fascinated by how many seeds are compressed in a milkweed pod. If each seed were to fall around the parent plant, the competition would be too great for many of them to survive. Therefore, each seed has its own silken parachute wings to catch the wind and travel where new milkweeds can grow.

Milkweed is edible when cautiously treated in almost every stage of its growth and makes an excellent supplement to common garden vegetables. If collected when young and tender, that is, when only a few inches high, and cooked like asparagus, the crisp succulent shoots make an excellent dish of greens. The leaves have a taste somewhat like that of spinach after being cooked. The milky white latex that gives milkweed its name is bitter and poisonous, but boiling and straining a few times removes the

bitterness and toxins, and makes the greens taste as mild and flavorful as any garden vegetable.

A Lakota pipekeeper friend of mine has a striking cluster of common milkweed along his front walkway to his home. Knowing that when the seeds dissipate by the early to mid fall, they leave a skeletal stand of unattractive remains, I asked him why he has so many milkweeds displayed in the front of his house. His answer was highly informative. "Don't you know that milkweeds are good medicine? Moles and warts can be removed in a matter of a few weeks when milky sap is applied daily."

Having a couple of protruding moles on the side of my body I began to research the possibility of ridding myself of these worrisome spots and discovered several studies claiming the milky sap of the milkweed not only removes warts and moles over a short period of time but certain skin cancers as well. Knowing that there was an abundance of this roadside plant found throughout my condo garden sites and at Spring Valley's prairies I began to tear off leaves to apply the oozing milky sap daily for three weeks on my two moles. Despite a slight burning sensation, the moles practically disappeared and five years later are barely noticeable. Needless to say, this is one example of the incredibly rich medicinal and edible qualities prairie plants offer to the greater community, if we as modern synthetic driven consumers only took time to understand how indigenous peoples learned over many generations to respectfully treat the prairie like a wild natural drug and food store without the middle person.

Native Americans cultivated milkweed plants for centuries. The Ojibwa used the flowers and buds in soups. The Chippewa cut and stewed the flowers and ate them like preserves. The common milkweed was a source of a sugar. Lakota people collected the perfume scented flowers in the morning while they were still dew covered. They then were squeezed to get a juice that was boiled until it yielded a tasty brown sugar.[3]

Whether or not human beings ever decide to make better use of milkweed, wildlife has been making good use of it all along. Many insects feed on its leaves or its nectar. Monarch butterfly larvae eat milkweed, ingesting a protective poisonous substance that stays with them through adulthood and causes inexperienced predators like birds to vomit before learning not to eat them. Hummingbirds also compete with insects for the sweet nectar, bypassing the pollinating process because they never land. Another bird, the Baltimore oriole, does not use milkweed or its insect associates as a food source, but values the fibers in the milkweed's stem. It uses these fibers to strengthen its hanging nest.

Memories fade of a childhood that creatively explored the natural world as if on another planet. As distinct fragments of a once unbroken and grand native landscape, such plants as the common milkweed no

longer serve as imaginary devices for creepy outer space fantasy. They are no more alien than the bison and tall grass prairie were. Illinois agriculture over several decades allowed expansion of crop fields practically to the roadsides to keep up with production along with excessive herbicides like glyphosate, while over tilling to unintentionally starve and undermine generations of massive monarch populations. The result has been endless agricultural miles upon miles of dead zones. Combine that with climate change altering untimely weather of rains and drought and we have perhaps one of the most beautiful butterflies in peril on the brink of extinction. Knowing how serious the problem is, I applied for a Monarch Way Station certification through the University of Kansas for Town Square and was approved.

The Fate of the Monarchs Lie with the Milkweeds

Each fall, hundreds of millions of monarch butterflies migrate from the United States and Canada to overwintering areas in Mexico and California where they wait out the winter until conditions favor a return flight in the spring. The monarch migration is truly one of the world's greatest natural wonders, yet it is threatened by habitat loss in North America at the overwintering sites and throughout the spring and summer breeding ranges as well.

The monarch butterfly population has fallen to about one-third of what it was in 1993 according to the World Wildlife Fund and its partners which found a loss of more than 16 million butterflies in 2017 alone.[4] In 2017 the area the monarch population occupied was 15 percent smaller than that of the previous year, down to just a few hectares. The butterfly species has greatly suffered for years due to deforestation, including increasing illegal avocado plantations in butterfly preserves.[5] Knowing these alarming issues hit home to where I lived and gardened, I decided to do my small part in giving these struggling fritillaries a much-needed migratory stopover.

Opposite top: **Such butterfly attractants as prairie coreopsis and the striking pumpkin colored butterfly milkweed can draw gardeners to consider introducing native plants for bringing critical ecological affinities back to their homes.** ***Bottom:*** **As a host plant for the caterpillars of the monarch butterfly, the butterfly milkweed (*Asclepias tuberosa*) helps to play a key role in the monarch's life cycle. One can never plant enough of these sensitive milkweeds that require very little disturbance in open, sandy, clay mixed soils.**

Monarch way stations are places that provide resources necessary for monarchs to produce successive generations and sustain their migration. Without milkweeds throughout their spring and summer breeding areas in North America, monarchs would not be able to produce the successive generations that culminate in the migration each fall. Similarly, without nectar from flowers they have co-evolved with for thousands of years these fall migratory monarch butterflies would be unable to make their long journey to overwintering grounds in Mexico. The ever-pressing need for host plants for larvae and energy sources for adults applies to all monarch butterflies and all other butterflies around the world.

Knowing that placing too many signs in a site spoils the view and aesthetics of the garden, I made copies of our Monarch Way Station certificate and posted them at each condo building in the laundry room's glass covered bulletin board. The response was very positive with people actually bringing me monarch butterfly larvae to introduce to the gardens.

Keeping Aggressive Native Plants in Check

Diversifying the berm into a colorfully vibrant, constantly changing prairie garden was my prime objective. To remove invasive tansy weeds I added a few varieties of prairie sunflowers to dot the landscape which included prairie sunflower, Western sunflower and showy sunflower. Little did I realize that these initially innocuous, sunny faced flowers carry short but creeping rhizomes that can spread throughout your garden aggressively if unchecked, depleting soil nutrients along their path.

At first I felt overwhelmed by this seasonal ground choker. I began digging up the roots and cooking them like potatoes and toppings for making pizza but I could not keep up with their relentless determination to dominate the berm. Eventually, after years of frustration to control this rapid growth, I decided to remove the clumps of rhizomes by circling around the young late spring shoots with a sharp spade, pulling out the stems and bagging them. With handfuls of mixed prairie grass seeds like switchgrass, Indian grass, and big blue stem, I tossed them into the disturbed areas during the rainy season. This was an ongoing effort since these sunflowers are very drought tolerant and can bounce back faster than you can say "have a nice day."

Despite years of steadily moving across the gardens, these prairie sunflowers did not retreat, but I began to accept them for what I saw them attract. The flowers attract bumblebees, Miner bees, large Leaf-Cutting bees, Halictine bees, bee flies, butterflies, and skippers. Typical butterfly visitors include Pearl Crescent, Painted Lady, and Checkerspot butterflies.

These insects seek nectar, although the bees also collect pollen. The caterpillars of the butterflies Silvery Checkerspot (*Chlosyne nycteis*), Gorgon Checkerspot (*Chlosyn gorgone*), and *Vanessa cardui* (Painted Lady) feed on the foliage of these prairie sunflowers and other sunflowers. The caterpillars of several species of moths and miscellaneous other insects feed on various parts of sunflowers. This includes the larvae of *Microrhapala cyanea* (Leaf Miner Beetle) and *Gnorimoschema sp.* (Gall Moth sp.), the latter forming circular galls on the stems. The large and nutritious seeds are eaten by mourning doves, blue jays, crows, many kinds of songbirds and small rodents like meadow voles and field mice not to mention these last two eat the roots as well.

By stepping back and observing over a few seasons, I discovered that sunflowers are among the most valuable prairie garden plants for wildlife and pollinators. They produce large, nutritious seeds for birds and other wildlife, and have abundant and accessible supplies of nectar and pollen that attract numerous pollinator species. In short, prairie sunflowers may not be as bright, towering and bold as their annual, non-native, short lived, roadside relative common sunflower when in full bloom, but they're far from a useless weed or exotic invasive threat.

Over the past two decades, the prairie plants on the berm have come and gone but the species that have endured the road pollution, salt runoff from the snow plows, severe drought, and invasive, aggressive weeds have been the Silphiums, deep rooted adapters related to the Sunflower family. As the trees began to shade the prairie garden at Spring Valley Nature Sanctuary I asked the manager if I could rescue these stressed out prairie docks. He agreed and I wound up digging down over three feet to extract a football size tuber root system with skin twice as tough as a turnip.

With the onslaught of the steel plows in the 19th century followed by relentless earth pushing bulldozers from the 20th century to the present, Illinois's diverse prairie terrain vanished except for a handful of native plant species. Prairie dock (*Silphium terebinthinaceum*) continually returned despite such soil degradation, popping up every year for decades off the sides of main roads with root systems over 16 feet down in search of deeper water reserves. Each leaf has a thick, weather resistant, medium sandpaper texture, particularly on the underside, and is up to 18 inches long and 12 inches wide, appearing like small elephant ears facing east and west retaining photosynthesis. On a hot summer day, clasp a prairie dock leaf between your hands and notice that the leaf is several degrees cooler than the surrounding air. The cooling is caused by evapotranspiration, the loss of moisture that originated several feet in soils beneath the plant, rooting to where water reserves run deep.

Native Americans and pioneers chewed prairie dock to cleanse the

mouth and teeth. As a child playing out in the open fields, I remember chewing the resin from such Silphiums which exuded naturally from the plant, and can also be obtained through incision by just peeling the outer skin. Formed on the upper part of the flowering stem, it is an inexpensive substitute for mastic and is used as a chewing gum to sweeten the breath.

Pragmatic and resourceful pioneer women used the large leaves as bonnets to endure the excruciating intense summer heat of the day during their outdoor chores. Standing as high as ten feet with radiant petals to match its preeminent stalk, this highly adaptable survivor of modern development found in dry as well as wet prairie conditions still reigns supreme over the prairie gardens, especially on the berm. During the blooming season in mid-summer the pollen and nectar of the flowers attract long-tongued bees primarily, including honeybees, bumblebees, Little Carpenter bees, Cuckoo bees, Miner bees, and large Leaf-Cutting bees. Some butterflies occasionally visit the flowers, including Sulfurs and Painted Ladies. Other visitors include short-tongued bees and various flies.

Come early fall the sunflower like seeds are easy to collect for future propagation but leaving them for birds like goldfinches which can easily disperse them at some other fertile spot while picking out a steady seasonal diet will equally suffice.

On the opposite north end of the prairie berm where light shines longer through the day a solo Silphium still remains as a reminder of my dear friend Ruth Macintyre who allowed me to transplant from her doomed garden yard. Perhaps the tallest prairie plant of all, the compass plant (*Silphium lacinatum*) draws similar insects and birds to its towering presence reaching over 11 feet at peak growing season. Pioneers knew this plant was a means from preventing lost children. When the prairies stretched across vast open spaces as an endless waving sea of treeless tallgrass, children under 5 feet could easily become disoriented if they played away from home. So the parents would tie a red bandana on the top of these plants. Similar to prairie dock, more pronounced and definitive finger like leaves on opposite side of the stalk during the peak growing stage would point north and south like a compass, thus the name fits perfectly.

Resistant, tenacious and unscathed by periodic prescribed burns, the Silphiums have outlasted all the other introduced prairie perennials on the berm. Ruth would be proud and happy to know that these enduring plants of the tall grass prairie are still "feeling the berm" and might be for a long time, lasting over a hundred years if future landscapers and decision making board members remember how special they were and still are to the awakening suburban native gardens, slowly gaining acceptance at the condo association but still well below an embracing familiar status of the tulips and daffodils.

5

Little Jurassic Parks and the Spread of Native Rain Gardens

What better place to install a native rain garden than by the property manager's office? Nature can ease the residents' temperament to the pain of disputing monthly association fee payments, neighbors complaining about loud music, leaky water pipes, kids running loudly down the hallways after school, trash being left by the garbage drop off, real estate issues, washer & dryers not operating in the laundry room, rules and regulations violations, and on and on. Research has shown that viewing healthy vibrant gardens is associated with lower reported anger levels.[1] Moreover, higher exposure to nature from apartment building windows is linked to greater scores of self-control and restraint. People can become more civil and calmer when entering the official domain of residential complaints and issues, the property manager's office.

After years of a neglected, remnant, ornamental garden bordered by conventionally landscaped exotic bush honeysuckles with dominant clusters of tiger day lilies and established common blue violets as a blanketed ground cover, I received funds from our condo board to convert the area measuring about 350 square feet into a raised bed native rain garden. With a large window overlooking the site, people could view a lovely, lush, primeval rain garden of changing, colorful, seasonal plant diversity. Using a roof runoff downspout, water could consistently provide sustenance for plants spreading throughout the trapped stone block raised bed border. Soil and mushroom compost was added to replenish the site and plants were determined based on a partial light exposure and intermittent rainwater.

Rescued perennials from the commercial onslaught of home developers included colonial spreading mayapples, scarlet fruited jack in the

Looking through an office window one is comforted by a rain garden and distant eco-gardens encompassing the green ash trees.

pulpits, yellow, prolific, pod driven celandine poppies, feathery ostrich ferns, serpentine flowering green dragon, starry flowering black cohosh, and the delicate pinnate foliage of the Jacob's ladder. I also introduced seeds of purple coneflower, tall meadow rue, wild columbine and transplanted spade loads from the condo's woodland ash grove of an overly abundant *Eupatorium fistulosum*: Hollow Joe Pye Weed. Of all the introduced plants excelling with ecological beauty and prolific return, it is this prodigiously elevated, red purple stemmed, wet meadow pollinator magnet that sees the most visitors. Hummingbirds, swallowtails and monarch butterflies are seen busily jumping from one flower cluster the size of a volleyball to another during the peak blooming season in late summer building up energy reserves for migrating hundreds if not well over a thousand miles to Central and South America, hoping to stopover at other pollinating friendly habitat way stations to complete the journey.

Knowing how well the rain garden was thriving next to the building, I began to experiment along the walls of both condo complexes. Along the side of the building wing where I lived, bordering the wall, was a four-foot-wide gravel strip. I asked management for permission

to remove these gravel stones and install a rain garden. Factoring the costs of installing native plugs and the repercussions of such a project not encouraging, I tested out the soils on the strong sunny south facing end of this building by introducing thousands of annual and biennial mixed seeds of cosmos, Mexican poppies, Mexican Hat coneflowers, zinnias, petunias, begonias, snapdragons, morning glories, sweet Williams, impatiens, and sweet peas. After lightly raking the impacted dry soil, I laid newspapers over the removed gravel to keep the weeds from popping up and spread bags of cheap soil over the dampened papers to keep them from blowing away. Little did I know that 1999 in the Chicagoland area turned out to be one of the warmest years on record and the demand for watering the plants was enormous not to mention the association's effort to rescue the lawn from becoming a scorched earth.

Illinois is classified as a temperate zone 5 for hardiness but that season it took a dive south to zone 7, one of the most oppressive conditions for working outside that I ever experienced. The plants were gasping for water consistently and so was I. I watered weekly until mid fall and then decided to let the flowers die out. But the warm weather continued well

Barren strips of gravel along the building are removed and replaced with a preparatory layout for introducing native wildflowers by the door entrance.

into November with blooming spectacles spilling over into the first week of December.

In many places of the country where watering is scarce, spreading several inches of mulch in the garden helps insulate the soil, keeping roots from getting too hot and dry. This also cuts down on surface evaporation of moisture from the soil. But there was a growing idea spreading throughout the nation applied to conserving water around buildings and runoff terrain.

The rain garden concept was developed in the early 1990s in Prince George's County, Maryland, by developer Dick Brinker seeking an ideal storm water management system for median strips, parking lot islands and swales. After several years of research, the company invented a "bio-retention" system that temporarily stored runoff and cleansed it of hydrocarbon, oil, heavy metals, phosphorus, fertilizers and other pollutants that would otherwise drain into storm sewers and eventually discharge into streams, rivers and lakes. Once the idea was proven quite effective, it was given the much more commercially catchy name of "rain garden" and the word speedily spread across the nation.

I decided that something extraordinary was possible around the buildings. Rain gardens could be applied in areas once barren with limestone gravel. The next year I used the same soil preparation procedure, adding another 40 feet by 4 feet annual-biennial garden along the other building wall on the south facing end to test out the soil, spreading similar annual-biennial seeds from the time proven site. Only this time I hardly watered the site and waited to see if conditions were conducive to a low maintenance prairie garden.

The results were astounding.

As if providing the best fertilizer when I only added the cheapest soils followed by initially watering during the first three weeks after seeding in early May, the garden exploded with the most bursting assortment of rainbow colors ranging from bold and bright to pale and pastel. People walking along the main sidewalk would gaze off in the distance about 200 feet from this experimental site and walk on the property to get a close up look at this glorious display.

I explained to a couple of knowledgeable gardeners passing by that my intention was not to nurture annuals and biennials but test the land out for creating a native prairie garden. They did not seem that impressed about this transitional effort but thoroughly raved about the temporary garden as it was. Much of what unfolded in this rain garden successfully came to fruition due to concentrated runoff water coming off the brick wall, regular full afternoon light and weed free soil due to a combination of gravel cover and lawn care practices keeping the weeds in check.

Mixed non-native annuals and biennials are initially applied to test whether this experiment to introduce eco-gardens along the brick wall would work. A half day sun and rain coming off the south facing condo wall combined with warm retained heat after sunset kept the plants vibrant and healthy, prolonging the growing season.

I was convinced that the soil was easily suitable for spreading native gardens along a once barren bordered landscape. In the late spring I began adding prairie plant plugs and seeds within targeted areas along the building walls of both condominium buildings. All of the seeds were collected from the condo property and Spring Valley Nature Sanctuary where I offered native seed exchanges collected from the prairie berm. Initially, the gardens were not impressive like the colorfully flourishing, short lived annual-biennial experiment. But I knew that in due time the rain gardens would provide ongoing, low maintenance, ecological wonders with beauty and diversity throughout the seasons.

One particular 9' by 40' garden site along a strong south facing wall proved that having prescribed burns next to where the residents lived did not seem necessary if one was willing to weed and clear the area. With afternoon light directly on the site and a clay mix soil cooperative enough to invite prairie plants to build a mesic prairie, the wildflowers, forbs and grasses eventually evolved into a wonderfully complex, pollinator friendly

community. Every garden I created was done with the intention of covering all seasons so that one could receive a genuine feeling for how nature works through the year looking outside one's condo windows.

By early May one could spot shooting stars, prairie phloxes, wild lupines and prairie smoke; followed in June by wild strawberries, nodding wild onion, leadplant, little blue stem, common milkweed, heath aster, white wild indigo, blue false indigo and smooth meadow rue; and continued on to July with purple coneflower, meadow anemone, common evening primrose, thimbleweeds, prairie brome, side oats grama grass, New Jersey Tea, prairie coreopsis, prairie and western sunflowers, wild bergamot, foxglove beardtongue, prairie cinquefoil, and wild petunias. By mid summer the tall grasses rose to form delicate flowers found in big blue stem, Indian grass, switch grass with a flowery cavalcade of black-eyed Susans, grey headed coneflowers, royal catchfly, followed during the back half of the season into mid fall with zigzag goldenrods, old field goldenrod, common boneset, New England asters, smooth blue asters, and sky-blue asters. In the winter, various prairie grasses like switchgrass,

Applying Wisconsin granite rocks along a defined 40-foot-by-9-foot fenced off space of introduced tall grass prairie garden keeps the hired-out landscapers and Canada geese from invading the site. Soils were prepped and tested out using annuals and biennials with excellent results.

Canada wild rye, Indian grass and big blue stem were left to fill the occasional snow packed garden leaving a serene majestic structural dimension captured by the fluctuating movement of the winds.

While nurturing the prairie garden, I discovered that different plants need different nutrients which feed off of each other requiring that they do not need much intervention to maintain their health. Nutrients occur naturally from sources such as bird and animal droppings, soil bacteria,

After three years from introducing this extremely low maintenance tall grass prairie garden, residents outside their window see the intimate details of wildflowers, bees, butterflies, and a dazzling display of orb weavers.

nutrient fixing plants like such legumes as the indigo plant family, the atmosphere and the mineralization of rocks aided by fungi. Over time the cooperative interplaying dynamics of this self-regulating plot began to bring an organic resilient life of its own, adapting to different weather conditions to meet the challenge.

Another Native Woodland Rain Garden Awakens the Ecology of Gardening

Setting a rain garden between two patio units receiving just a few hours of direct afternoon light invited a woodland garden to magically unfold. A down spout running off the roof into this 15' by 10' ground level plot could adequately water the plants. In a room once used as an office and now open for casual lounging, a large window facing the garden in between the two condo units provided a lovely view of this lush, captivating little "Jurassic Park." Removing a small box elder while leaving the stump, yanking up several young European buckthorn saplings, and pulling an abundance of annual, biennial and perennial invasives like motherwort, garlic mustard, henbit, burdock, horseweed and creeping charlie cleared the way for regenerating a forgotten earth on the property.

I rescued bloodroot, wild lettuce, prairie trillium and alumroot from oblivion, while digging up Virginia blue bells from a private home, collecting tall bellflower seeds off a side road by Wildcat Mountain State Park in Wisconsin, and purchased plants at a prairie nursery including woodland phlox, Jacob's Ladder, garden phlox, maiden hair fern, wild geranium, and Pennsylvania sedge. I also spread seeds in the late fall from established woodland native gardens, which included mayapple, blue cohosh, Canada wild rye, bottlebrush grass, switchgrass, grey headed coneflower, purple coneflower, wild columbine, thin leaved coneflower, grey headed coneflower, woodland sunflower, thimbleweed, hollow joe pye, and New England aster.

One introduced native I deeply regret was collected in a rundown bus parking lot a few blocks west of Chicago's Navy Pier amidst the open concrete cracks along a broken fence. Never collect tall goldenrod seeds unless you wish to see your garden become a fortressed crop of homogenous plants depleting the soils while removing any natives in the way. Years after introducing this plant, their fluffy floating seeds have spread into other native gardens beckoning me to clip the heads constantly. Once established, the rhizomes of the goldenrod bring havoc to any potential investments for creating an eco-garden with diverse depth.

However, one redeeming lesson I discovered made me feel that nature is very forgiving. A huge ant hill developed over time by the stump of a box elder tree. Thinking that these ants could literally devour the entire garden, I placed an ant pest trap by the hill allowing the scouts with their rubbing antennas to wipe out the entire colony as they share this pesticide attractant to eventually reach the queen. It wasn't until I learned about the benefits certain ants have with seed distribution that I began to change my toxic ways.[2] Besides opening up the earth with their complex tunnels, ants are not only profound distributors of soil but of seeds as well. A startling number of woodland wildflowers have fleshy, fat rich appendages called elaiosomes serving to attract ants that carry off the seeds to the nest where they perform an ecologically beneficial act.

After removing the outer part of these seeds for food they carry them

Early spring ephemeral signs of a mostly shaded woodland garden by a downspout, sandwiched between two patios and a vacant office window, with bloodroot (*Sanguinaria canadensis*) popping up out of the bur oak leaves like magical awakenings of light. Once the flowers fade the leaves serve as an outstanding ground cover for several weeks. Grown mostly through rhizomes with the seeds dispersed by ants, bloodroot can fill the woodland community gardens for many seasons.

out a tunneled nest inside the colony like dead ants into compost like piles, nurtured by the nutrients released from the decaying waste. Eventually, some of these seeds find a way of sprouting up out of the earth and mature. I thus discovered why the introduced bloodroot began to spread in places close to the ant hill. Such a realization in understanding the process of mutualism brought a halt to terminating them because I was prejudging their role in the little remote shady native garden outside the windows of the condo residents. Undoubtedly, ants rule.

Knowing that the ants seem to be beneficial to the gardens I decided to put a moratorium on insecticides in the 9' by 40' prairie garden adjacent to this rain garden as well. Over a period of years, I watched a tiny mound morph into a one-foot diameter two inch high hill where ants moved laboriously transporting sandy debris out of their tunnels. At first I did insecticide the mound thinking they would invasively disrupt the prairie garden but learned from their mutualistic connections to the bloodroot and other woodland wildflowers that various ants serve as earth distributors creating elaborate tunnel systems, turning over as much soil as earthworms do, while aerating the soil and redistributing nutrients. During the off season when the ants were dormant I would spread the granulated mound soil around the garden which seemed to help activate the plants to a healthier condition. The ants would always territorially rebuild the mound year after year in the same spot as hard steadfast colony workers with intricate tunnel systems throughout the prairie rooted soils.

Rather than pests, ants can be understood as our partners in gardening. One of the most easily observed and important roles that ants play is that of seed dispersers. Over several growing seasons I noticed the prairie plants popping up in distant locations where they were planted. Perhaps transported by the wind or ants, the soil seemed to nurture a healthier foundation which allowed me to feel assured, knowing that prescribed burns would not be necessary especially since they were restricted from being applied along a residential building.

Introducing Charming Native Shrubs to Accommodate Wildlife and Humans

Much of the borders around both condo buildings either stretched with gravel or shrubs consisting of bush honeysuckles. One oval island plot extending 30' by 7' had two mature downy serviceberries commonly called Juneberries (*Amelanchier arborea*). Native to much of North America, more particular to the upper Midwest and northern prairie region of Canada, they are quite adaptable to cool climates with low fertility soils

and can tolerate road pollution. Five-petaled, showy, slightly fragrant, white flowers in drooping clusters which appear before the leaves emerge in early spring eventually give way to small, round green berries which turn red and finally mature to a delectable dark purplish-black in early summer.

In early June as I made my routes around the landscape, I would stop and gorge myself on the lush edible berries resembling blueberries in size, color and most importantly taste. I could have made jams and pies with these delightful, festive fruits but would only extend such tasty pleasures into making spur of the moment wonderful smoothies or conjuring up sauce to top my vanilla ice cream. Landscapers do not have much time nor the energy to come home and prepare special treats, preferring quick fixes.

Residents were bewildered when they saw me picking these berries and eating them raw. Most of them did not trust eating anything in the wild let alone on cultivated landscapes. When I offered a bag of these delicious Juneberries to a resident, he immediately replied, "No thanks, you never know what's in them."

In this case I had a fairly good idea what was in these berries. They are incredibly nutritional. A typical Juneberry is 18 percent sugar and about 80 percent water. They have lower moisture content than blueberries, so they have relatively higher amounts of calcium, natural fiber, proteins, carbohydrates and lipids in them. They are a superb source of iron, containing high levels of phenolic compounds, particularly anthocyanins, and they provide healthy amounts of potassium, magnesium and phosphorous. To add nutritional fuel into this dynamically nutritional shrub, they have as much vitamin C, thiamin, riboflavin, pantothenic acid, vitamin B-6, folate, vitamin A and vitamin E as blueberries, and also trace amounts of biotin.

Birds like warblers, orioles, tanagers, cardinals, thrashers, catbirds, crows, robins and other thrushes not to mention rabbits and squirrels gorge themselves on these lush berries. Over 120 species of Lepidoptera use these shrubs for nesting or pursuing an abundance of sweet nectar. Knowing how much these shrubs offered to my seasonal, healthy boost as well as the wildlife, I decided to return the favor and plant a native woodland garden to beautify the understory of two splendid native shrubs and open unvegetated soil. I included bloodroot, may-apple, celandine poppies, golden alexanders, painted trilliums, sweet black-eyed Susans, purple coneflowers, black-eyed Susans, shooting stars, blue stemmed goldenrods, wild raspberries, and a token non-native grape hyacinth. The two serviceberries were now welcomed with a colorful cast of woodland flowers to keep them company throughout the seasons. People could look directly out their condo windows on the ground floor and see a plot come to life with

diverse colorful seasonal changes reflecting Illinois native woodland flora. Many of these wildflowers were either transplanted from previous gardens or rescued through the Wild Ones. The rest were purchased from prairie nurseries through the condo association.

The Importance of Introducing Native Gardens Where You Come and Go

When people go to work on dreary monotonous highways of backed up traffic and endless rows of commercial strips and sterile residential landscapes, coming out a door of their condo to be greeted with a glorious array of New England asters, smooth blue asters, and sky-blue asters with grey headed coneflowers, and showy goldenrods certainly kick starts the day in an uplifting, sweet manner. And coming home after a long day at the windowless office or in some godforsaken work environment brings a moment of simple joy and uplifting relief with the beautiful range of native wildflowers by the doorway to welcome one home. In the heat of the summer season was the time for a grand awakening along the narrow gravel removed strip on both sides of the exit door. The full spectrum of colors exploded while the lawn changed from green to brown from the scorching temperatures peaking in July and August. Because asters are one of the most important fall nectar plants, a stretch of flowering plants seem to attract any and all of the pollinators desperately searching for native wildflowers in a suburban area where nectar has shortchanged a co-evolutionary link of meeting their nutritional needs. Butterfly larvae feed on asters like the Harris checkerspot, tiger swallowtail and the Pearl Crescent which favor New England asters. It is not out of the ordinary to see numerous butterflies fluttering in and out of the nectar friendly asters. As perennials, asters spread beyond the gardens, dotting landscapes with

Opposite top: **Serviceberries are an ideal setting for introducing a multi-seasonal composition native woodland community. This late summer display highlights smooth blue asters, rudbeckias, purple coneflowers, and blue stem goldenrods. Along the entranceway loop by the residents' windows this view is a lovely little site to be seen both inside the building units, outside in cars or up close.**
Bottom: **In early fall the Juneberries or serviceberry erupt into beautiful shades of reddish orange and salmon pinks with a canopied understory showing delayed seasonal changes extending the growing season. Such a charming multi-seasonal composition came to an end when a broken main pipeline needed to be replaced requiring a five-foot-deep by more than 80-foot ditch line to cut right through the heart of the garden.**

air borne seeds that catch the wind only to be eventually seen fully grown across the main road along a paved path bursting in abundance at a nearby pond. The big eco picture was beginning to nudge my efforts. Nationwide, others were catching on to the same values that I was discovering.

In the Northeast, natural landscapers are re-creating the dense layers of the native American deciduous forest; they replace lawns

Ornamental yet invasive honeysuckle shrubs and gravel stone borders are replaced by colorful spring through summer native wildflowers like sweet black-eyed Susans (*Rudbeckia subtomenntosa*) with a pagoda dogwood (*Cornus alternifolia*) comfortably nestled in the back. People entering and exiting the vestibule can appreciate a vibrant full diverse range of the seasons.

with understory species like dogwood, wild azaleas and native shrubs, ferns and woodland wildflowers. Midwesterners are also ripping up lawns, re-creating native tallgrass and shortgrass prairies. Arizonians are landscaping with Sonoran desert native species like giant saguaro, multi-stemmed ocotillo, and prickly pear cactus. They all share a common goal—to harmonize gardening and landscaping practices with indigenous forms of nature.[3]

As I was extending low maintenance, pesticide free, ecologically friendly landscapes, I received a letter of commendation from the United States Environmental Protection Agency and a small grant of $500 from the North Cook County Soil and Water Conservation District. Such encouragement boosted a confidence to keep going native. And the management and board of Town Square Condominium Association continued to support my work with such recognition although they began to wonder how far I was planning to go with this vision of converting open "sacrosanct" lawn and conventional ornamental landscapes into complex native eco-gardens and micro-habitats. After introducing ten rain gardens most of which averaged about 350 square feet, I continued to look around the open space property in search of more challenging projects to fill the ecological void while creating an aesthetically pleasant picture of living where nature can respectfully return.

6

Relating Trees to a Sense of Place

For thousands of years, oak savannahs and maple-hickory-oak forests stretched throughout northeastern Illinois but you would barely know that was the case where I lived. Except for a few areas managed by the park district and the village, most of these woods that made up the indigenous character of the land have vanished. No other habitats could be more diverse than when the prairie merges with the woodlands. Because of the open nature of the savanna, there are many areas of scattered light and shade where herbaceous plants can thrive even during the summer. A hickory-oak woodland, in contrast, is so shady during the summer that significant herbaceous plants are only found in abundance before the tree canopy has leafed out. These plants are therefore called "spring ephemerals."

Back in the late spring of 1999, while checking on my rain gardens on the far south facing end to our condo building, I would see a totally open lawn of about an acre and a half and wonder, what if native trees and shrubs could be added to this sun exposed wet mesic area to create captivating canopy woodland gardens? Conditions were ripe for planting swamp white oak, basswood, bur oak, serviceberry, and red oak. When mature these trees could provide food for wildlife and hosts for an infinite variety of insects and birds, not to mention contributing to the fight against climate change and global warming. Simply put, trees are carbon sinks sequestering carbon buildup which is at alarming, unprecedented levels today due to exponential use of non-renewable fossil fuel emissions and products devolving our future over the past 250 years of rampant global techno-industrialization. If they live a long life, these beautifully hardy figures of ancient natural history can store hundreds of years of carbon, reducing the production of carbon dioxide in our atmosphere.

I was determined to plant a small, soft revolutionary wrench in this pollution, mowing driven culture which, next to watching football on television, is considered to be an obligatory sacred practice for genuine male acceptance into the American way of life. Instead of breathing gas fumes I was hoping to eventually breathe air emitted from the trees and native gardens produced by a "no mow" approach to living as if the earth and our health matter. And the residents could open their windows during the growing season breathing fresher air from this investment.

Converting lawn to woodland eco-gardens would not only save money for the homeowners' association and create needed food and micro-habitats for the local wildlife, but it would also have the twofold benefit of producing less and absorbing more carbon dioxide. A no brainer for making a small difference curbing the global threat of climate change in my community.

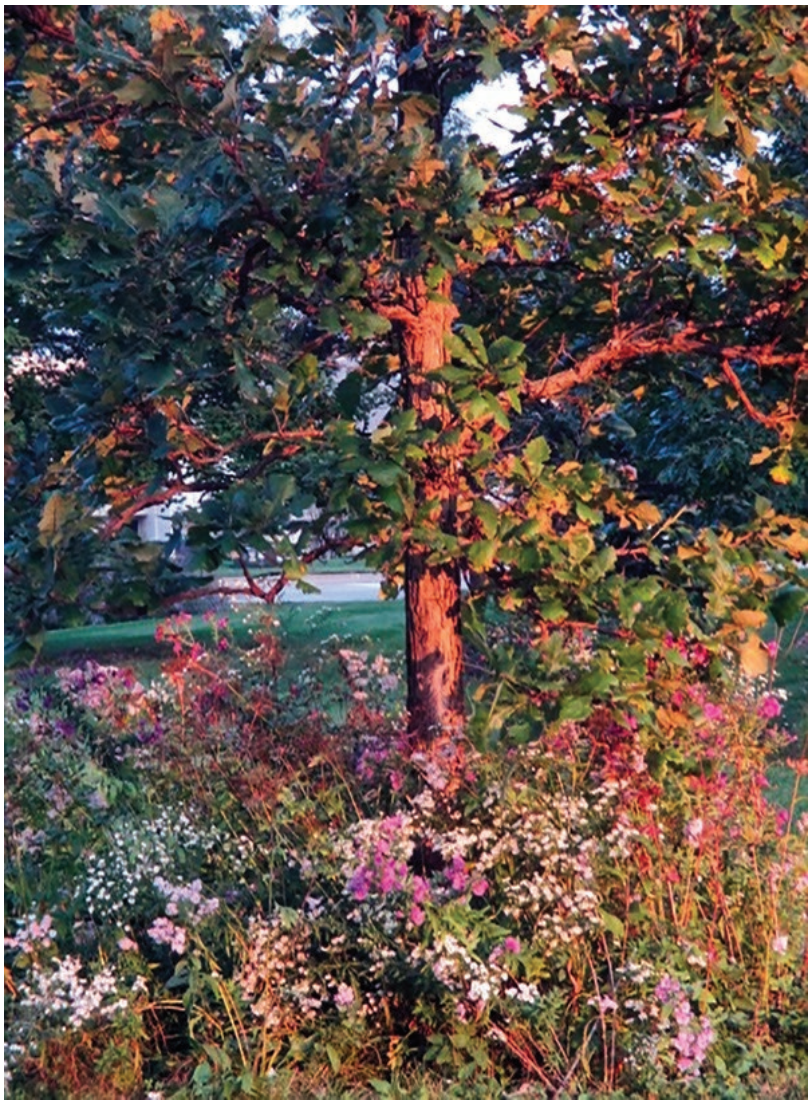
I received 13 tree seedlings averaging about four feet high from root to top at a local native plant sale held at my nature center for a cheap price

Acres of open lawn and a new dawn. A diverse woodland grove of a swamp white oak, bur oaks, basswoods, and red oaks dot the moist bottomland landscape as young saplings planted in 1999.

of $20 each. Spreading them about 30 feet apart, I dug into the soft wet, claylike soil about two feet down by three feet wide, a task that had me sleeping like a log for several days afterwards. Extending a hundred-foot hose line to thoroughly water all the trees made my day a little bit easier although there were times when I would lug buckets of water for several yards to the trees on hot summer days because the hoses were being used on the lawns. But with the rainy season kicking in during the late spring, I did not need to water too much. The conditions were perfect for the trees to take off in their growth spurts. For the next 16 years I watched these imposing royal figures grow to heights well over 40 feet.

Watching the seasons change with these growing, deciduous, indigenous investments helped me see the benefits of leaf litter offering free mulch, free weed control, and free soil enrichment, inviting periodic fires for removing dense vegetation and invasive weeds, while strengthening fire adapted oak trees like bur, red, and swamp white.

As of 2015, the oaks have yet to produce acorns but that hasn't stopped robins from making their nests or other wildlife from seeking shelter from scorching days and inclement storms in them. Insects, beneficial and harmful to these trees, nest in the bark and feed on the leaves, requiring a steady treatment to keep the oaks healthy from diseases.



A naturalistic understory eco-garden surrounds a mid summer red oak by the swale like a protected oasis highlighting the fullness of contained, interwoven diversity, teeming with beneficial migratory butterflies and a micro-haven for rabbits and squirrels.

A Shock Felt Around the World of Ash Trees

When the invasive Asian emerald ash borer came to Schaumburg, 12,000 ash trees met their fate. As an alien species without a predator

A Wild Ones chapter comes to the rescue to relocate both the soil and native plants from dying ash trees infested with the Emerald Ash Borer.

to curb its aggressive population, the entire country became subject to this horrific infestation. Millions upon millions of ash trees died as a result of this unchecked beetle. Town Square Condominium was no exception but I knew about this nasty decimator before it became an epidemic disaster in my town, since I had been working at Spring Valley Nature Center as a habitat restorationist. For a few years a tree service company had been contacted through board approval to try to save the

Understory native gardens that were threatened from the removal of emerald ash borer diseased ash trees were transplanted with the soil to the far south end of the property to begin a new place with young oaks.

woodland ash grove on my side of the condo building that I had spent years cultivating into healthy, expansive eco-gardens. With appropriate insecticide treatment over the years, the hope was that these trees would bounce back. In some cases this 50-plus-year-old grove of ash trees showed promising signs of recovering and withstanding the onslaught of the alien borer. But you could see looking up at the canopy

that the borer had arrived. An organization worthy of its name soon came to the rescue.

The board and management knew it was just matter of time before the entire grove of 24 trees would need to be removed and replaced. But I had a plan to relocate the years of work I invested in these gardens. Periodically, I would invite people who knew about native plants to help me transplant these gardens to an established grove on the other side of the property where I had introduced a mixed native woodland years before.

But the day that struck me the most was on May 23, 2013. Twenty-one people showed up, mostly affiliated with the Wild Ones, to help me transplant huge pot loads of soil and plant material into two prepared sites on the property. Later, prescribed burns were introduced to keep down any aggressive non-natives from creeping into these relocated plots. Borrow-

Keeping the weathered ash leaves contained a few inches from the trunk combined with the residual woodland chaff from the native plants, the early spring prescribed burns provide nutrients and reduction of encroaching early season non-native species threatening the eco-gardens (photograph by Mary Therese Jean).

ing an electric golf cart used by the maintenance guys at Town Square to help me move the numerous five-gallon pots to the opposite side of the property helped my back and other rescuers immensely. For every pot they transplanted to the new site, they received a pot of transplants themselves. A win-win situation.

Learning from Mistakes

Over the years as the disease subsided the treatment on the ash trees seemed to be working for the remaining fortunate ones still standing. The crowns of the trees appeared healthy and it looked like they might survive. However, an important lesson to learn about this imperiled woodland site with mostly green ash trees would be having a mixed grove of native trees is significantly more sustainable and enduring. Thus, the board developed a diverse native tree introduction plan. For every ash tree removed, a new native tree would be at the least added averaging about nine feet above ground in height when installed. As a result of the 12 ash trees removed so far, a red oak, two white pines, five red maples, two tulip trees, a Kentucky coffee bean, and three swamp white oaks have been added to a remaining established stand of green ash, pin oak, mixed spruces and firs.

Municipalities tend to purchase the same trees and shrubs at a bulk rate thinking the budget will not go bust but are left after a few decades wondering what went wrong, as exemplified in my town where thousands of ash trees were planted in the early stages of a demanding boom town only to die off because of the emerald ash borer. Diversity of many different types of appropriate native trees and shrubs would withstand such a wave of disease and if applied would limit extensive tree damage to the greater community. This was the sad lesson we as a board and management realized and would try to reconcile with the land.

Along the busy four lane traffic of Roselle Road and a brick wall stretching about 75 yards facing a strong east facing sun were Sargent crabapples lined up like a procession. Nothing but the same tree species except for scattered stands of neglected variegated hostas, popping up along a pumice gravel border. As I looked along the wall I envisioned another possible type of crabtree more native to the once thriving forested community to the area. *Pyrus ioensis* or *Malus ioensis* is among three native crabapple species in Illinois. Commonly called the prairie or Iowa crabtree, the flowers of this native crab apple are large, fragrant, and showy during the short period when they bloom during the spring. Planting them at a height of just four feet above ground, they are now 15 to 17 feet high after 16 years but can elevate to well over 20 feet within 25 years

A tulip tree, Kentucky Coffee bean tree, red maples, and swamp white oaks are introduced to replace a fading grove of EAB larvae-infested green ash trees. Diversity of trees prevents any diseased epidemic effects from devastating a landscape.

of initial planting. To walk under these lovely scented trees in early May along a sidewalk soothes your walk albeit for a short distance while continually providing full shaded cover for pedestrians on hot summer days.

Prairie crab apples are often densely branched, providing good nesting habitat for the yellow-breasted chat and song sparrow along with about 30 different varieties of birds like cardinals, grackles, robins, and cedar wax wings who voraciously enjoy the ruby red fruited little crabapple berries. Woodpeckers and other insectivorous birds also benefit from the large variety of insects that these woody plants attract. Pruning back these shrubby branches from overhanging on the sidewalk as well as cutting back sprouting suckers keeps a stately appearance but does not take away the essential beauty.

On the far south end of the brick wall, I introduced my first swamp white oak. At four feet above ground upon planting about 16 years ago it now stands over 35 feet and can tower as high as 80 feet with a trunk up to three feet in diameter and last for two to three hundred years. Imagine

By mid-spring native Iowa crabtrees (*Pyrus ioensis*) blossom along a sidewalk releasing a sweet smell that almost makes you forget being by a main busy road. Once commonly found in pastures by hawthorns in great abundance throughout Chicago, they are now barely visible anywhere throughout the entire county let alone state. Preferring to grow along woodland edges, a brick wall facing the west end with a strong sun from the east suffices well to mimic an adequate environment for receiving light.

such an awesome enduring presence surviving through road pollution, salt runoff and climate change and you might have the ultimate native tree for the future in urban landscapes.

Not many Illinoisans can claim they have seen a mature swamp white oak due to excessive logging practices for generations but if they did they would not forget its lofty presence. On the campus of Northeastern Illinois University (NEIU) is a small, protected swamp white oak savanna (*Quercus bicolor*). It is only an acre in size, has no endangered or threatened species, and on the face of it, seems very insignificant compared to some of the Midwest's larger savannas. In fact, this minuscule savanna is representative of a string of urban savannas (and prairies) being restored throughout the watershed of the Chicago River's North Branch by volunteers working with the North Branch Prairie Project, the North Park Village Nature Center, and the university.

A young, resilient, single swamp white oak (*Quercus bicolor*) along Town Square Condo's brick wall, although confined, stands healthy by a road, tolerant to pollution fumes coming from vehicles. Preferring full to partial sun and well drained, moist soil, this location could allow the tree to reach heights between 60 and 100 feet with lateral branches most likely pruned back to accommodate the sidewalk and road.

To honor this resilient Midwest tree is to remember the greatness of where it thrived. This rare oak I took pride planting looks ever strong and straight, unbending over the road predominantly aiming to the sky. Situated in a moist area with a slight depression to receive any runoff water,

a strong east facing sun shaded out by building structures on the back side of the afternoon provides excellent pre-conditions for a long enduring life.

Just to the south of the swamp white oak, a bur oak was planted; it barely withstood a strong hot summer but bounced back as true bur oaks tend to do. Highly resilient and only a few feet from the roadway, this particular location could produce a higher maintained care knowing how profoundly horizontal the branches could become. Because of a miscommunication with the hired-out landscapers the wrong tree had been planted. The swamp white oak was the preferred choice, having less extended horizontal limbs, but this tough, eight-foot woodland prairie tree had already been planted and over the years has recovered from a rough seasonal heat wave. However, I would expect after a few years the branches will need to be pruned back periodically unless the association wants to see falling acorns and squirrels bouncing on windshields in the fall. No prairie tree is tougher and more enduring than the bur oak which has been found to live close to 1,000 years, outlasting any infrastructure built in this town.

Now that the diversification of native woodland trees has been introduced, and that a tree service periodically comes in to treat the trees for potential diseases and infestations, the association has taken protective measures to establish and preserve the quality of this grove as an investment in appreciating the property while comforting the residents into a serene natural setting. Watching several of these trees become a part of the land with quaint natural histories preserved underneath their impressive presence, one cannot help but to feel a calming sense of beauty and wonder entering a once chemically driven, carefully guarded, homogenous green, mowed domain. Only ecological pockets of a distant past dimly lighten up the landscape but perhaps enough imagery to captivate a hopeful impression for healing what was lost over the past two hundred years. It was a small promising beginning creeping back again at a time we need to be addressing the loss of native trees in our greater populated areas.

U.S. Forest Service researchers examined aerial imagery taken between 2009 and 2014 in the nation's towns and cities and what they found was disturbing. Each year during that period, the country's metropolitan areas lost an average of 36 million trees, losses that have serious implications for people and wildlife.[1]

With more carbon dioxide in the atmosphere than any time in the past million years compounded by a continuous unchecked rate of fossil fuel consumption, cutting our forests to plant immense carpets of lawn is a grossly inadequate way to curb climate change.[2] Additionally, the value of

introducing and keeping a diverse native tree population in one's property not only reduces the steady accumulation of carbon emissions but also invites more varieties of native wildlife, insects, and birds to find a home or temporary stopover. Such natural landscapes become both healthier and wild by design not to mention increasing property values.

7

Creating a Bioswale and Woodland Grove with Mother Earth's Blessings

Lawns are designed to pollute. No question. When you consider the amount of chemicals, pesticides, herbicides, use of water, fertilizers and use of fossil fuels to constantly maintain a large tract of lawn, you cannot help to ask yourself why?

Much To-Do About Lawns for a Big Environmental and Ecological Price

Dr. Gerould Wilhelm, noted Northeastern Illinois taxonomist and botanist, once explained to me that the suburban landscape surrounding Chicago is rapidly turning into a "green desert." Sick, overworked, depleted, poisoned by synthetic chemicals, and addicted to unnecessary drug fixes, lawns imminently will become homogeneous carpets of ecological abandonment, wasting inordinate amounts of water, time and most importantly soil, to protect an illusion of serene order and pride.

Wilhelm added that the once natural waterbed of most outlying suburbs is irreversibly changing into the innerspring "Chemlawn" mattress of suburbia, flowing continually down streets into the sewer. Most of the storm water is systematically rerouted to another engineering route, unecologically designed, creating a hard packed, salt laden residual under the surface to burden the homeowner's aspiration for a healthier self-regulating landscape. These human caused stresses, according to Wilhelm, ultimately lead to the formation of a "green desert." And with routine mowing of the lawn, roots shrink

facing surface heat stress and demanding more water, thus inviting a continuous hard packed unabsorbed ground facilitating a fast run-off, most likely discharged into a manhole down the unrestored creek, stream or retention pond. In other words lawns invite high maintenance, mindless conservation practices to stress out earth's nurturing design.

Overfeeding is one of the chief sources of lawn problems and soil depletion. Here are some easy to follow guidelines for a richer soil system and a healthier conditioned organic lawn when assessing the feeding procedure for the fall.

First, and foremost, grass doesn't give a hoot if the fertilizer is natural or organic, but the organisms in the soil care a great deal. Chemical fertilizers will chase them away, leaving the lawn vulnerable to insect and disease problems the following spring. They may even contaminate such soil aerators as earthworms, which birds may wind up eating. Lawns that are chemically fertilized may look lush, but lush growth produces watery tissues, which become more susceptible to disease, and the protein quality suffers.

At one point I tried introducing drought resistant buffalo grass (*Bouteloua dactyloides*) seeds as a lawn replacement on an experimental basis in the parking lot islands, only to have them constantly mowed by the hired-out landscapers. Early settlers of the Great Plains probably made their houses from the dense sod mats formed by this short grass perennial. When used as a lawn or path it rarely needs mowing thus the catchy name "no mow" grass. I eventually dug out clumps of this over mowed native plant and gave them a new home on the dry mesic prairie berm where they blend inconspicuously, crowded out with the rest of the taller grasses and forbs. Bison don't roam the grasses at Town Square condominium but the food they survived nicely on for thousands of years still remains in obscurity.

What I learned over the many years of conservation and native landscaping is that chemical fertilizers can neither add to the humus content of the soil nor replace it. They destroy its physical properties, and therefore its interwoven life processes. When chemical fertilizers are put into the soil they dissolve and seek natural combinations with minerals already present. New combinations glut or overload the lawn, causing it to become unbalanced. Others remain in the soil, many in the form of toxic residue.

In short, if lawns are a necessary part of your landscape, consider the importance of how such an application may hinder the quality of the soil and the living environment.

Installing a Bioswale for Stripping Away High Maintenance Lawns

Much of the property at our condo association utilized this conventional landscaping chemical application. That was about to change in a rather dramatic way when I introduced my most successful rain garden project: a 150 foot by six-foot to nine-foot-wide wet prairie–wetland swale on the south end of the 300 S. Roselle Road condo building. Originally used as a storm runoff swale covered with pure Kentucky blue grass and fescues, this site did not have a problem with invasive weeds since the hired-out landscapers intervened with herbicides to keep them out over several years of high maintenance. Nothing but a completely entrenched chemically protected carpet of lawn stretched along the swale.

The Village of Schaumburg's Senior Landscape Planner, Martha Dooley, who was a strong advocate for introducing native plants with the business community, neighborhoods and parks provided me with a minimal list of recommended wet prairie plants as well as useful ideas to get me started. The Village recommended that oversight from their landscaping division be applied. Once my design was approved by the planning department, I began to add additional sedges, grasses and forbs to the swale.

I started the project in the spring of 2007, knowing that the grove of native trees would not undermine a full sun to the swale. In early June, I laid down a long, black plastic roll to kill the grass, weighing down the sides with sign posts to prevent any open air from entering. Clear plastic works even better, penetrating the roots as well as the surface growth. That month turned out to be one of the hottest and driest Junes on record. When they withered and died, I used a weed whacker to level the grasses for raking up, saving it as a mulch later on. Then I lightly tilled the swale and surrounded it with a fishing line fence to keep the geese out while allowing the mallards, voles, rabbits and the occasional garter snake to enter. I then wheel barrowed about 800 five-pound granite rocks piled high from the parking lot to border the swale on both sides to prevent the hired-out landscapers from mowing into the swale and to keep the water contained in the event of storm water runoff.

After this preliminary prep in early July, I was ready to start installing plant plugs from a reputable nursery. These included 30 moist tolerant native species such as blue vervain, Virginia wild rye, swamp milkweed, obedient plant, New England aster, sweet black-eyed Susan, blue flag iris, great blue lobelia, Queen of the Prairie, prairie dock, heath asters, cardinal flowers, rattlesnake master, cup plant, tussock sedge, little blue stem, switchgrass, golden alexander, common spiderwort, sweet

Using a wet prairie–wetland swale design, a black plastic tarp is laid over 150 feet by six feet water drainage runoff to kill the grass during an intense summer heat. As a hired in-house native landscaper, keeping the weeds out while the hired-out landscapers sustain a high maintenance lawn allows a clearly defined transition to convert the targeted area into a native rain garden.

grass, ironweed, prairie cordgrass and blue joint grass. I broadcasted an annual cover crop of oats to suppress non-native weeds from propagating. Using the bulky leaf paper bags of mulch I raked up from the swale, I reintroduced the parched recycled grass around the established plugs.

By mid–July rains poured heavily for a few days filling the swale with more than enough required water while the roots began to work their way into the claylike soil. It was as if Mother Earth was compelling me to bring nature back from this suburban "green desert" on artificial life support systems. The results were nothing short of miraculous.

Opposite top: **When the grasses died, they were raked up and saved to mulch later. The swale was lightly tilled and several hundred granite rocks accompanied a border of fishing line fence to keep the lawn mower and geese from encroaching the embryonic native plant community.** ***Bottom:*** **By mid-summer, transplants of moisture-tolerant wet prairie–wetland natives were introduced such as several types of sedges, New England asters, swamp milkweed, sweet black-eyed Susans, great blue lobelia, ironweed and tall coreopsis, all of which were mulched with the "recycled" dried lawn grass.**

That fall, I broadcasted collected seeds from many of the species I had transplanted in July. The only thought entering my passionate visionary pursuit was to completely erase any trace of lawn on the bioswale with an abundance of low maintenance, conservation designed, insect pollinator friendly, aesthetically captivating appropriate native plants.

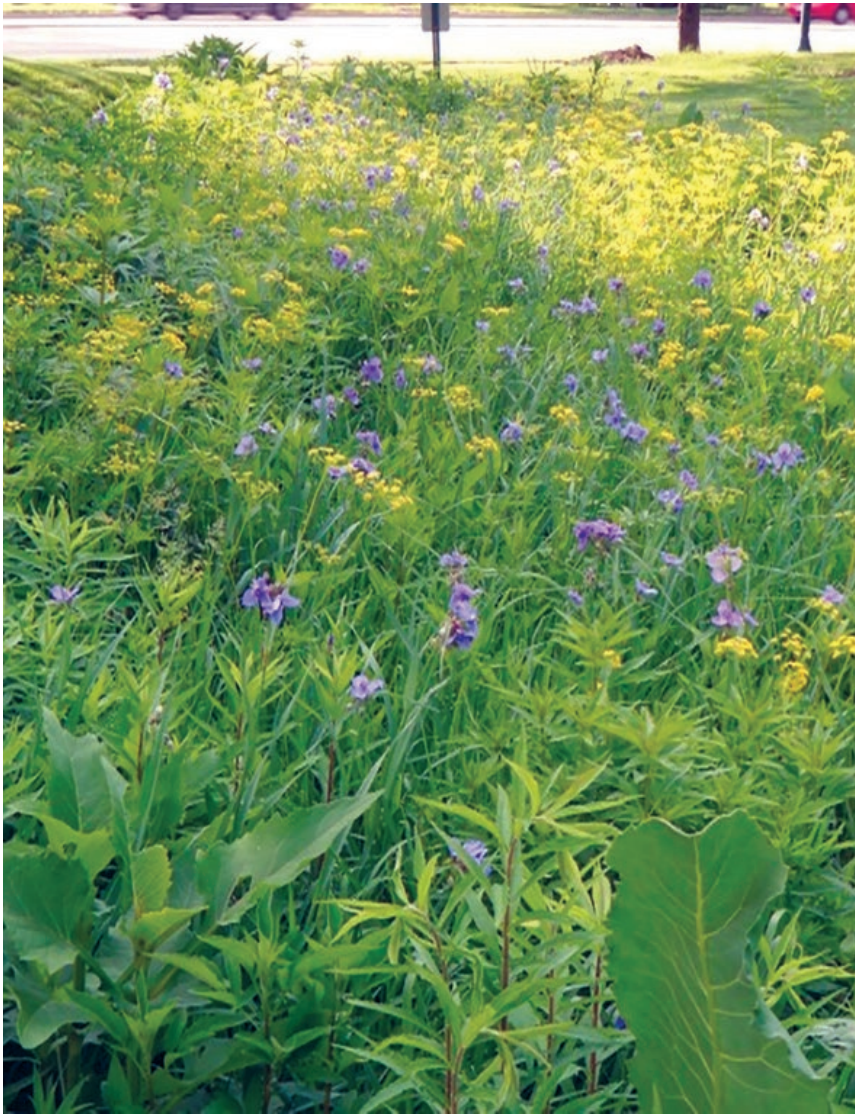
First Burn on the Swale

After a couple of years of the wet natives working their way into the soil, I performed my first burn in compliance with the state, county and local governments. With the mid–March south winds 10 to 15 mph, the sky blue, the snows gone and barely a damp surface to be detected in the entire swale, I steadily torched the weed whacked excess remains of the season. Like a spreading carpet unrolling with subdued embers and in some cases surprising high flames elevating to about seven feet, the speed of the crackling roaring fire was incredibly swift lasting just a few minutes

After string trimming down the swale in early March and spreading the debris evenly around allowing a few days to dry out, the prescribed burn smoothly moves between the bordered granite rocks like a rapidly moving rolled out carpet with south winds 10 to 15 miles an hour.

in length. My first burn on the swale was a smooth, deeply satisfying success except for a few burnt blue spruce branches caused by the indirect passing heat of the fire immediately put out upon contact. Every time I gardened by that little burnt gap at the base of the towering Colorado blue spruce, I was reminded about paying attention to this fire volatile tree where the swale flowed by.

Several days after a prescribed burn, an early spring heavy downpour flows through the storm water runoff bioswale as a productive absorbing filter teeming with young sprouting wet prairie plants and germinating seeds introduced the previous year.



Above: **By late spring golden alexanders and common spiderwort explode in the downside of the bioswale with Silphiums in the foreground like cup plant and prairie dock.** ***Opposite top:*** **Towering compass plants (*Silphium laciniatum*) with their tap roots capable of descending to well over 15 feet receive a morning shade on the upside of the bioswale. This non-aggressive forb can live up to 100 years.** ***Bottom: Lobelia siphilitica*** **or great blue lobelia does very well in moist wet meadows or swale and is highly beneficial to bumblebees and native bees. Not true perennials, they will, however, self-seed very prolifically.**

Skittish entering into high vegetation, the late summer–early fall swale with tall New England asters keeps the Canada geese from intruding into the wet prairie. However, they find much comfort on open lawns resembling a tundra like terrain.

That year the swale took on a beauty and wonder that filled my soul with complete joy. Spiderwort and golden alexanders casted thousands of flowers, blue iris flags, cardinal flowers radiated a beauty in the lower depression pockets, swamp milkweed drew butterflies, marsh blazing star and great blue lobelia spread profusely, prairie dock and compass plant soared like mythical beanstalks, blue vervain spread throughout half of the swale, tall coreopsis and cup plant grew further down the swale where the water was less, and New England asters exploded up and down the swale wherever there was the slightest opening. Living up to 100 years, towering compass plants (*Silphium laciniatum*) with their tap roots descended well over 15 feet.

Success on the Swale Invites Expansion

By the spring of 2010 I extended an extra 25 feet by 7 feet swale using the same procedure to the original bioswale just 12 feet from the runoff

manhole where the water in the past channeled away from the property into expansive retained lawn depressions, detention ponds, eventually discharging into nearby creeks and streams.

Altogether, the swale replaced about 1,100 square feet of lawn. Now, there was a slow flowing natural filtering system to keep the water from running somewhere else, absorbing into a lovely dynamic rain garden with two connecting rainwater drainage pipes buried a few inches in the ground to reroute any potential flooding problems close to the building.

In the process I added more cardinal flower, Riddell's goldenrod, Culver's root, rough and prairie blazingstar, white snakeroot, crested oval sedge, early fen sedge and broadcasted seeds from great blue lobelia, sweet black-eyed Susan, black-eyed Susan, and wild nodding onion. When flooding occurred in mid spring the water, while plants are barely sprouting, could exceed the level of the swale but by early summer when the plant communities were gloriously displaying their seasonal prime, the rains tended to soak deeply into the wetland-wet prairie bioswale.

The successful filtering absorption of water in the bioswale invites expanding the channeled wet prairie to its limit before reaching a manhole to some engineered storm water runoff locations where lawn depressions and open retention ponds receptive to invasive non-native plant communities are likely to receive the discharge.

Two drainage ditch lines are installed away from flood drawn areas close to the building adding rain garden water to the bioswale.

Unanticipated Problems Arise

Admiring the continuous subtle and profound natural beauty in the twilight of a prime growing season brought so much blissful appreciation to my day. But not everyone saw this regenerative transformation of the land the same way I did.

One day while seeing the children get off the school bus in front of the condo entrance, I saw some of them running across the swale to take a short cut into their residential homes. As children, unconcerned about keeping this swale ecologically and aesthetically intact, they were obliviously crossing over the swale with visible impacted footprints in the swale, crushing wet prairie flowers like bottle gentians, rattlesnake master and obedient plants. I decided to clear a path across the mid-section to the swale and lay flagstones across this area to allow these kids bursting out from an indoor school world to pass through nature's wonders without damaging the plants. That problem seemed to be solved until I noticed shortly after the bus left one day, another crisis appearing before my very own presence.

Older children were riding their bikes right over the swale cutting

If you are not fortunate to catch the intense crimson showiness of the cardinal flowers (*Lobelia cardinalis*) in the wild, then perhaps you might be able to find a home for them in your garden. Accompanied with a fading cluster of Great blue lobelias, both short blooming familial flowers offer highly attractive nectar for hummingbirds in the bioswale.

through prairie cordgrass, common water horehound and blue flag iris. I was livid but decided not to chase these energy bursting, thrill seeking bikers, instead addressing this issue to the board.

I proposed to the board that a bridge be installed right down the middle of the swale to allow pedestrians and bikers alike to cross over the swale without damaging the nurturing fabric of plant communities there. The board approved a thousand-dollar wooden bridge with metal rails.

Crossing over a flagstone path through the swale facing a basswood's full autumnal foliage respectfully accommodates the wet prairie plants as well as short cutters and the gardener maintaining this native landscape.

Not only was this bridge functionally attractive but it served its purpose. Kids were popping wheelies over the bridge and not cutting across the swale. I reminded a few high wheeling oblivious kids at times about using the bridge and they respected my request.

Now a bridge and walking flagstone path cut through it. When the late summer into the early fall appears, the swale around twilight takes

Cutting through the middle of the bioswale of prairie cordgrass, Indian grass, big blue stem and common water horehound, a bridge is installed to keep children from riding their bicycles into the sensitive site.

on a lovely impressionistic bucolic softness of light and shade that would inspire Monet to paint a series titled: The Bioswale series. Radiating light illuminates sawtooth sunflowers, Queen of the prairie, New England asters, sky blue, smooth blue and heath asters, bottled gentians, common boneset, great blue lobelias, prairie dock, rattlesnake master, Indian grass, prairie cordgrass, blue vervain, turtlehead, tall coreopsis, hollow Joe Pye weed, sneezeweed, switchgrass, sweet black-eyed Susan, compass plant and common ironweed.

Butterflies, wasps, bees, moths, beetles, goldfinches, house wrens, hummingbirds; a feeding and pollinating frenzy of interactive networking elicited the purity of the moment come to a seasonally heightened harmonic convergence.

New Birds on the Block Come to the Rescue

Once both the swale and woodland grove were introduced over a couple of years, I installed a bluebird house in mid–April anticipating the

Top: **The bridge also allows people to enjoyably walk over a bioswale teeming with multi-seasonal examples of a wet prairie community viewing such lovely flowers as Queen of the Prairie and blue vervain.** ***Bottom:*** **Elegant robust blue flag iris (*Iris versicolor*) blooms in late spring with broad arching blue green leaves reaching four feet in height. Found in the richly abundant bioswale, the foliage evokes a mood of transporting you into a lush primeval world far from the Middle America suburban turf.**

Striking cobalt blue closed petals of the prairie bottle gentians (*Gentiana andrewsii*) captivate not only us but bumblebees as well. With just a narrow opening at the top strong bees pry open the petals and stick their heads in to crawl inside aiming to sip nectar while depositing pollen it may have carried in with the anthers before passing for another drink.

coming of an auspicious mid spring arrival. Unfortunately, the word got around at my nature center that bluebirds had already arrived in the area and were well established nesting their families. Instead, a house wren moved in and made himself at home with nesting material consisting of twigs, topped with a softer cup of prairie grasses, rabbit fur, and feathers collected around the native landscape. Males will construct the nest dramatically to invite the females as a courting display to breed and raise their young. For days while working around the swale I heard that rich bubbling sound not making the connection that this little Pavarotti was announcing his operatic presence to his future mate. Slightly disappointed, I nevertheless welcomed the additional arrival of a mate to bring nature back to this grand backyard. Little did I know that this family of four fledglings and two parents would help save the bioswale from complete and utter catastrophic infestation.

Japanese beetles thrived that year due to excessive heat and rain in the swale and throughout the property devouring rose bushes, basswood

Above: **Showy deep purple flowers of the towering, tough stemmed Common Ironweed (*Vernonia fasciculata*) in the thick of the sunny, moist swale highlights late summer nectar for long tongued bees, butterflies and skippers primarily.** ***Opposite top:*** **Twilight stretches of glimmering light upon a prime seasonal swale of New England asters and sedges generate wonderful opportunities to photograph the undulating beauty of the moment.**
Bottom: **The glory of transforming lawn into a showcase bioswale is to realize that nature can come back when there is a nurturing balance with soil, water, light and a healthy biodiversity to awaken a sacred sense of stewardship with your little piece of the planet.**

Above: **Shaded portions of the swale from a basswood and a few off camera red and bur oaks invite wet prairie plants to retain moisture through the late afternoon as seen with the ironweed, common boneset and scattered sky blue asters.** ***Opposite top:*** **Rattlesnake master, blazing stars, big blue stem, prairie dock, and New England asters transition a mixed overlap of seasonal changes making the garden come to a representational flux of how a healthy, diverse wet prairie functions.**
Bottom: **This colorful painted lady (*Vanessa cardui*) lands on an *Echinacea purpurea* siphoning the nectar through its long tubular proboscis. An abundance of purple coneflowers on the property provides plenty of available nectar, resulting in a larger number of eggs deposited on these plants.**

An Eastern tiger swallowtail (*Papilio glaucus*) opens its wings as a solar collector during dusk while comfortably feeding from the loose, rounded flowers of common boneset (*Eupatorium perfoliatum*).

leaves, serviceberry leaves, and my favorite prairie plant of all: the stunning Queen of the Prairie, *Filipendua rubra*. Day after day in July into the early fall, they came out of the ground of the lawn making skeletal gossamers out of these plants. Historically, these unwanted alien species were accidentally introduced from New Jersey from ornamental plants and have wreaked havoc on any land that meets their voracious mouths.

In the evenings I would snatch these resting invaders and put them in a slightly biodegradable soapy bucket of water to see them float to the top lifeless after an hour or two. Then I would drive over to Olde Schaumburg Park pond and drop them off the deck only to see a few of them swim to shore and possibly propagate in that area escaping from the mouths of the local fresh water fish and crayfish in the pond. Eventually, I would leave them longer in the bucket of fate and drop the beetles down a manhole to safeguard another potential infestation somewhere else.

I could not keep up with the inordinate population that year and saw many lovely plants sacrificed because of an attractive foundation based on lawns. My hope was to continue to move full speed ahead from lawn breeding grounds to native habitats. Unfortunately, I was desperate that year, thinking maybe I could catch them with Japanese beetle traps, but all these pheromone attractive devices did was invite the surrounding neighbors' Japanese beetles to come too, creating an exponential problem

Once stretching throughout the grandeur of moist, tall grass prairies, *Filipendula rubra* or Queen of the Prairie is truly a magnificent, regal plant from the rose family spreading with rhizomes up and down a full sun section of the swale. Japanese beetles can devour these cotton candy-looking fluffy gems within a few days if unchecked.

where they were spreading their devouring tsunami appetite all over the property. That was probably the worst season of infestation and would have been completely disastrous had not the heroes of this shock wave arrived. When the season wound down I had a chance to look into the bluebird box where four house wrens were born. The nest was still intact and I began to decipher what remains were left from their seasonal fed diet. Scores of Japanese beetle carcasses were found throughout the inner nest cavity. Amazingly they turned out to be voracious beetle eaters. I always considered the house wrens from that moment on to be a true guardian of native plants.

Now there is an ongoing plan to introduce beneficial nematodes. Though they are harmless to humans, animals, plants, and healthy earthworms, beneficial nematodes aggressively pursue insects. The beneficial nematodes can be used to control a broad range of soil inhabiting insects and above ground insects in their soil inhabiting stage of life. More than 200 species of pest insects from 100 insect families are susceptible to these nematodes. When they sense the temperature and carbon dioxide emissions of soil-borne insects, beneficial nematodes move toward their prey and enter the pest through its body openings. The nematodes carry an associated bacterium (*Xenorhabdus species*) that kills insects fast within

A giant golden digger wasp (*Sphex ichneumoneus*), besides being an outstanding pollinator of native plants, favors this candy cane fragrant mountain mint and is also a voracious beneficial predatory feeder of grasshoppers, katydids, crickets and Japanese beetles. Living and nesting underground, females will drag their paralyzed prey across the ground with its antennas to a tunnel at a nesting chamber where she lays eggs on top of it. She closes the chamber behind her and never returns.

48 hours. The bacteria is harmless to humans and other organisms and cannot live freely in nature. Several generations of nematodes may live and breed within the dead insect, feeding on it as a food source. When the food source is gone, they migrate into the soil in search of a new host. When the pest population is eliminated, the beneficial nematodes die off and biodegrade. Beneficial nematodes are so effective, they can work in the soil to kill the immature stages of garden pests especially Japanese beetles before they become adults.

Over the years of combating this menacing intruder, cooler and dryer periods of intense heat during the summer have additionally undermined the population, helping curb the unwanted inhabitants to a manageable problem. As a result, the eco-gardens surrounded by extensive maintained lawns are displaying an undisturbed continuum of native floral beauty and wonder without ravenous pests ridding the seasons of such ecological treasures.

Ignoring Invasive Plants Over Time Can Come Back to Bite You

Japanese beetles were the most destructive insect in the gardens, but trees could be just as detrimental. There was one invasive seed that sprouted up from the side of the swale that caused endless agonizing problems for years. A silver poplar cottony fluff of seeds had been introduced on the property most likely from a residential home in the neighborhood and I failed for a few years to recognize it. After rising up over 25 feet within eight years, I realized this single successful, unwanted, fast-growing tree was not going to be a beneficial contributor to the embryonic rain garden. Silver poplars can mature to over 70 feet with a diameter around two feet producing hundreds of thousands of wind dispersed seeds. Putting out sucker roots and germinating seeds to fill the entire acreage of a cultivated native landscape was a potential nightmare waiting to happen.

Seedlings began to sprout roughly every 10 feet in the bioswale inhibiting other wetland and wet mesic plants from growing and reducing the sunlight, nutrients, water and space available. In short, the bioswale was under a serious ecological threat. After nine years of this invasion, the tree was removed by hired-out landscapers while I had to cut and herbicide through dabbing any sapling suckers coming up from the swale for a couple of years along with annual prescribed burns. With such an ongoing application I was able to completely restore and improve the health of the swale and there has not been a single silver poplar seedling detected since.

Now, as I walked the back of the woodland grove and swale, I was in complete awe to how the increasing ecology over a once predominant lawn was changing the face of the property. Around the established native trees were introduced micro-habitat eco-gardens teeming with shooting stars, golden alexanders, Penn sedges, Canada wild rye, black-eyed Susans, smooth blue asters, sweet black-eyed Susans, foxglove beardtongue, and common violets. As the fallen oak leaves curled their ends, they invited fire to breathe underneath them. There was enough understory fuel to burn around these ancient, time-tested, fire tolerant trees.

Investing in an Ecological Future by Planting the Oaks

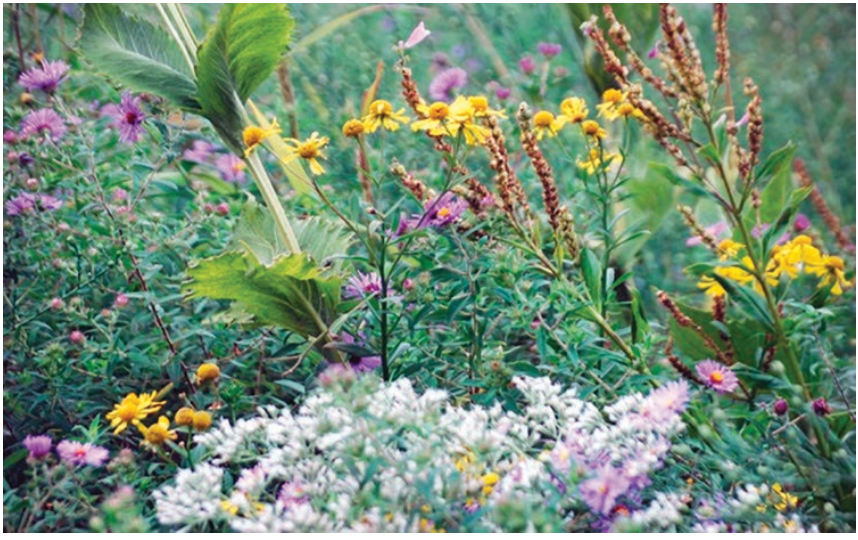
In a few years acorns would be appearing on the planted oaks, produced after the tiny flowers, blooming early in the spring, have been

pollinated by the wind. The seed, or nut, is highly nutritional and serves as an important food for wildlife. Once the acorn touches the ground, a fate of many ecological possibilities unfolds.

To a certain kind of insect, like the snout beetle (also known as the acorn weevil), the acorn means not just food but a home. When the eggs hatch, the growing young eat the nut and live quite contentedly inside the shell until they are ready to emerge as an adult.

Some animals like raccoons and opossums recognize acorns are inhabited by these insects and actually prefer them for food. A shell full of insects might have less nut meat, but it offers enough insect protein to make up the difference. For some birds such as the jays, crows, wood ducks, wild turkeys, nuthatches, mallards, and woodpeckers acorn is a staple food whether eating them whole or pecking through the hard outer shell and eating just the tender nut they find inside.

Native Americans once consumed the acorns in great quantities, but now people do not appear to be eating them anymore. Different tribes in oak-filled woodlands developed various methods for leaching out the bitterness. Some buried them in wet soil, and others soaked them in streams until most of the tannic acid was gone. They either roasted the nuts or



Through the years the bioswale becomes a healthy mix of micro-replicated wet prairie diversity. Sky blue asters (*Aster azureus*), common boneset, sneezeweed and cup plant flower appear while blue vervain has already gone to seed. Varying seasonal times for feeding on different seeds and nectar adds more diversity for attracting wildlife and insects, like bumblebees, digger bees, leaf cutting bees, bee flies, butterflies and skippers.

ground them into meal for bread or mush. The taste is bitter but palatable from personal experience.

Wild mammals also eat acorns, and a few serve as the oak tree's agents in planting their seeds. Raccoons, coyotes, foxes and skunks feast on acorns in the fall. Moreover, deer also eat them in the autumn and dig

Asters explode like endless micro magenta stars in the swale not to be outmatched by the showy, waving Indian grass and switchgrass with the backdrop of an illuminating pumpkin splash from the basswood (*Tilia americana*). Viewers are given a rare opportunity to see a dazzling living landscape in full autumnal regalia.

through snow for them during the winter. These animals, like the snout beetles and birds, play no role in planting new oak trees, but mice, chipmunks and squirrels store acorns for winter food and sometimes heedlessly plant an oak tree by neglecting to eat one of their stored seeds.

Squirrels serve as an important agent to the spread of oak trees. A gray squirrel at work looks as if it had been trained to plant trees. It carries each seed 50 to 100 feet from the parent tree, scratches a shallow hole with its forefeet, deposits the seed and covers it with soil and leaf debris. This near-surface burial hides the seed from other animals, and if the gray squirrels themselves happen to miss it in their random searches for winter food, it is planted at the highly suitable depth for germination.

As I viewed squirrels jumping into garbage cans around the condominium entrances scrounging for food scraps, I could not wait for the time when they would be re-connecting with their long endearing relationship to the oaks. By exerting a dynamic influence toward the survival of the oak forest, many animals are given the edibly abundant gift of acorns in return; a perfect reciprocal relationship if only humans learned to appreciate this impressive transaction of nature.

Unfortunately, established oak forests and scattered oaks in general are becoming rarer than any virgin tall grass prairie in Illinois due to the rampant disregard for protecting this endearing part of our state's natural heritage and climate change. But on Town Square Condominium property, oaks have made their presence known to become a solid part of the native plant community.

Meanwhile, the swale maintains a majestic, illuminating flow of multi-dimensional wet prairie and wetland vegetation inviting pollinators and critters to find comfort and sustenance in this life affirming, self-regulating community strip.

Passing cars and pedestrians could see the captivating changing of the seasons on the swale. Showcasing such a public spectacle contributes to a greater community benefit knowing that ecology and landscaping can work esthetically together in the neighborhood.

Winter Offers Security for Insects and Small Wildlife in Tall Grass Prairie Gardens

Open landscapes invite wildlife to find shelter in the swale from exposure to the cold and wind. Letting the standing native plants remain during the winter helps most insects as well. They can survive freezing temperatures either as eggs, larvae, pupae, or adults because insects produce an anti-freeze (glycerol) in their bodies. The glycerol keeps the water

in their tissue cells from freezing, expanding, and tearing the cell walls. Unfortunately, the biggest threat to over-wintering insects doesn't come from the weather. It comes from us, as we strive to "clean up" our flowerbeds, rich layers of leafy humus, and meadows. A little knowledge about how beneficial insects spend the winter can help us avoid killing them unintentionally.

During the winter when the snows drift into open tall grass stretches in the swale, the surface can be laden with elaborate runways and scattered burrows, most of which are excavated by the diminutive meadow vole. With deeper wintry conditions, voles live entirely in the snow, rarely poking their heads out to receive a fresh breath of air. They eat, sleep, play, mate and breed in that hidden dark world. Most predators cannot sense them. Hawks, owls, and crows cannot detect them. Coyotes and foxes spend a considerable amount of time attempting to snuff them out of their concealed tunnel systems.

Burning the swale every three years after the first couple years of initial burning allows a winter habitat for beneficial insects to survive. Avoiding exposure to harsh temperatures, meadow voles prefer undisturbed prairie plants to contain the snows for building tunnels to store cache like seeds and nest. Native landscapes can offer interesting winter landscapes to break up a monotonous covered lawn.

Out of the wind with a thick coat of fur, voles relate well to snow, using the surface as an effective insulator. Although the size of a house mouse, meadow voles (*Microtus pennsylvanicus*) are distinctly different. Unlike mice, they have reddish brown fur over their ears and a much deeper coat around the rest of their bodies.

If you are fortunate enough to spot the intricate snow-covered network, you will be amazed at what you may witness. At times, when the vole is hungry it will not come out of the snow to search for food. Instead, it will nibble off the slender stalk of a grassy plant in its enclosed tunnel, pull it down and cut it again until the seed head is reached. Imagine encountering a dried-up prairie grass stem in your garden slowly but surely being pulled down by a mysterious force hiding in the depths of the snow.

Although these native rodents can cause havoc to gardens, they also improve the soil by aerating it and mixing nutrients, accelerating the dispersal of vital mycorrhizal fungi and, thus, influence the survival of many species of prairie plants and native trees. Their nutrient rich fecal pellets are widely dispersed through their tunnel habitats to the benefit of new and growing vegetation. Highly reproductive, they provide an abundant food source for many predator mammals and birds.

While most of the tallgrass prairies in Illinois and elsewhere have vanished, one can still discover traces of survivors that once inconspicuously roamed the ecosystem. Keeping tall grass prairie gardens intact during the winter preserves that living memory of keeping the ecology of that season close to home.

8

Way Over My Head and Body

When I entered the property manager's office that Monday morning in the spring of 1999, I was feeling disheartened from a rejected job interview as an outdoor high school adventure educator at the Shackleton Expedition School in Massachusetts. I was paid to travel there and be interviewed for this position and was fully confident that the job was mine but was turned down for some unknown reasons. Property manager Kelly Jourdan knew how much I had been transforming the landscape during the earlier stages of this vision for the better and asked me a question that shook me up even to this day.

"How would you like to do the entire landscaping around the property as a permanent inhouse landscaper?" Stunned with such an offer I replied, "You know very well that if I am hired, I plan to convert much of this area to native gardens."

"Well, it can't be any worse than it is now," she answered. I said I would think about it and let her know soon.

That week I sat down with two of my most trusted friends in the field, at a local Mediterranean café across from my condo. Dave Margolis supervised the conservation and maintenance crew and Dave Brooks managed conservation services overseeing the general operation at Spring Valley Nature Center. I wanted their advice on taking this cumbersome and challenging job on while keeping my permanent part time job at the nature center. Knowing that my hours had been slightly cut during the week there, I felt this could be a good opportunity to fill the income loss. Margolis' answer did not boost my confidence. "I think you are way over your head in doing this. What makes you think your homeowner's association will buy into this native landscaping overhaul?"

Dave Brooks concurred and encouraged me not to dive into such a physical, lost cause challenge. Both felt I was not capable of handling this

job where usually a crew of eight workers once a week performed a clean sweep of pruning, trimming, mowing, weeding, mulching, applying herbicides, removing debris, and mechanical problems.

Despite their admonitions, I took the job, and for four years I barely relaxed from mid–April to the end of September weed whacking, targeting weeds with herbicides, mowing five acres every two weeks, trimming, watering, pruning, hand weeding, leaf blowing, adding native plant gardens, collecting seeds, and planting young four foot trees totaling an average of 30 hours weekly. Along with my work at Spring Valley as an assistant naturalist I was putting in about 55 to 60 hours a week. I did not have much of a life outside of my full work load, usually spending precious down time glued to the TV to recover from this burdensome non-stop schedule.

To top it off, during those nose to the grindstone years I also co-lead three four-day ecology-summer adventure camps for several summers in Devil's Lake, Wisconsin, in cooperation with a school district and park district while squeezing times where I could perform as a professional storyteller under the Illinois Storytelling Network as Swiftdeer-Paige, offering programs related to ecology, indigenous peoples and earth ethics throughout the northeastern Illinois area at schools, camps, and libraries.

As going through a divorce at this time hit me emotionally hard, getting immersed in my passionate drive to press on with such earth caring ventures helped me let go of past misfortunes. Better to invest my body, mind and spirit working outdoors toward improving a healthier landscape while reaching out to the greater community through engaging environmental educational experiences than be a lost soul at some local bar drinking myself to misery and ill health.

Such a laborious price from a lack of sleep almost cost me a serious head injury. While riding in the EX-Mark Lazer Zero turn lawnmower on numerous occasions, I would come across a horizontally elevated branch just a few feet from the ground. This green ash had a character that made the tree look majestic yet ominous. On the brink of facing pure exhaustion one sultry August afternoon, I tried to time the distance from the end of the building to that unforgettable protrusive limb. Driving with my eyes closed but heading in a straight line, I figured at a slow steady pace it would take me about 10 seconds and roughly 30 yards to drive there on the mower arriving right before that tree. Counting with my eyes closed on the brink of sleeping I reached 8 seconds and then as if my chin hit a baseball bat swung by the brawny hands of Paul Bunyan, I met my fate. An indirect hit but an excruciating jolt nevertheless. Luckily, my chin was scuffed up with a deep abrasion, no stitches needed and I did not see a doctor. But it could have been devastating, perhaps fatal, if my forehead had been the fortuitous receiver of this horizontally branched hardwood.

Eventually, the board and management continued to allow me to just handle the native gardens under a marginal income budget and I was relieved of all the conventional tedious landscaping duties by the end of 2003. Despite losing my health benefits, the downsizing of my workload felt simply liberating, letting the hired-out landscaping company take-over, because I could now move passionately and purposefully around the property spreading various applications of prairie, wetland and woodland plant communities to bring nature back.

No longer was I sitting for hours and hours on a gas guzzling lawn-mower, dirtying up the planet every other week from May through late October to cut the grass or mulch the leaves on five acres of lawn. At times I would drive that handy mower to and from the gas station and a hardware store with a pull cart, each about three blocks away. But the facts are that mower emissions pollute as much as automobiles not to mention emitting irritable noise pollution while having a negative impact on wild-life, destroying nesting sites and eliminating food for pollinating insects that nature depends on. Granted, the hired-out landscapers would still emit weekly fossil fuel pollutants on their seated mowers and deafening leaf blowing clean ups, but I was planning to reduce their routine sod cuts by adding more eco-gardens throughout the property. The Ex Mark was sold back to the company and a new dawn of bringing nature back the following year, 2004, was about to accelerate through the seasons. Out-side of using my durable, trusty legs more often around the property with a wheelbarrow, I relied more on the wheels of an electric golf cart used by the in-house maintenance crew and my modest gas guzzling camper mini pick-up truck for transporting equipment, water, and endless flats of native plants for the condo and future homes changing the bleak conven-tional face of suburban Chicago. In these troubling environmental times one can at the least minimize the addictive need to use fossil fuel in land-scaping through whatever resourceful and frugal means necessary.

9

Rescuing Nature and Friendships

One morning, a resident neighbor called me up at my nature center's office to alert me that a residential pond just up the road from Town Square Condominium was being drained for improving the retention pond and that thousands of fish, frogs, and tadpoles were meeting their fate from this callous action by developers. There was no relocation plan for all the voiceless critters. The friend urgently asked me if I could leave work and help him rescue helpless aquatic amphibians and fish. I asked my supervisor if I could be excused, borrowing the park district truck, wading boots and a few barrels to transport them into the Olde Schaumburg Park pond. He hesitated for a moment and said to go ahead just this one time, since the area was out of the park district's jurisdiction.

By the time I arrived, Curt Rose (pseudonym) was standing by his buffed flashy corvette waiting to guide me to a huge, almost entirely drained crater. Looking down I could not believe the magnitude of aquatic activity gasping for water. It appeared to be a total clear and present mini-act of ecocide. There were hundreds of tadpoles and leopard frogs, scores of bullfrogs, largemouth bass, blue gills, sunfish, catfish, and enough goldfish to fill a memorial pond at a zoo. The remaining turbid bottom water left a horrific splashing frenzy pool of fish and amphibians, dramatically suspending their comfort zones, struggling to survive in a rapidly shrinking world punctuated with the smell of extreme stress and death.

As a former Marine, Curt showed his heroic colors. Hell or high water he made the move to hit the shores of this pond with a mission to save and assure them to a new home. As a side note, the goldfish were not relocated but many of them were brought home by passing residents who wanted them for pet fish. Using plastic bags found around the neglected pond, I scooped up the goldfish and handed them to the new caretakers.

I've never forgotten this rescue effort where the world seemed to

stop on behalf of finding new permanent homes for these local, desperate aquatic critters. Such a fond remembrance of that experience kept Curt and me from having a complete falling out when we had had our strong differences on how the landscape should be designed and maintained on the condo property.

As I became more involved with converting the lawn into native gardens, my adversarial neighbor who was an active board member and president, constantly questioned my abilities and direction of introducing such a foreign perspective on the land. When I confronted him at a heated board meeting and asked him if he could name five native Illinois plants, he disdainfully asserted only one bona fide species replying "Pokeweed" (American), a native ornamental showpiece that gained my minimal respect.

There were times that I felt my landscape efforts were doomed because he wanted more colors and could care less whether the plant co-evolved over time with the pollinators or that they contributed to less pesticides, or less water use, or curbed climate change. He always emphasized certain flowers like purple coneflowers because they drew the radiant American goldfinch which made his eyes light up with childlike wonder. He also insisted that more rose bushes and mums be spread over a native woodland garden. His obstinate, limited knowledge of native plants to keeping the gardens from looking "wild" really undermined my ability to convince him, as well as the board he served, to respect and appreciate the purpose of creating micro-habitat landscapes as if nature matters.

Yet when push came to shove Curt would always let go and encourage me to continue my work. He served as my pain in the butt arch nemesis friend, always challenging me, never satisfied unless there was something there amidst the eco-gardens to mark a familiar plant he could assure the residents, "Oh there are some mums, or roses, or tulips." Over the years he allowed me to move ahead with this groundbreaking vision knowing that there was always in the back of his mind an unresolved need to not freak residents out with strange landscapes off the conventional horticultural map aimed at rebuilding the natural ecology of a forgotten prairie, woodland or wetland world present for thousands of years in Illinois before humans homogenized the landscape with lawns.

Still, we often butted heads over his way of disliking something but never admitting he was using a broad generality to prove his concern. Whenever he had a grievance with the gardens, he would tend to say, "People are wondering what are you doing about the weeds?" And I would ask, "Who is saying this?" and he would never tell me the name of the person. That left me wondering how I could explain to anyone directly why these specific plants bothered them in my attempt to restore a place to bring

nature back in a healthy, ecologically beneficial way. With background as a wildlife control expert, I felt he struggled with the conflict of addressing an ecology with the land and conventional suburban landscape where plants, almost entirely non-native, fill the lawn with pleasant comforts of familiarity. Other board presidents accepted my landscape approach and would seldom if ever ask about the variety of species and their benefits but just accepted my work as long as it did not look "weedy and unkempt."

In retrospect, I do feel that over the years Curt became a respected distant neighbor because I know deep down he grappled with rescuing nature from the thoughtless minds of developers while at the same time confronting the chemically dependent, ecologically stressed cultural imprints of what makes a landscape appealing. I feared nevertheless that his relentless steadfast view toward the predominant mainstream tugs of what makes the land appealing overshadowed my vision to make the changes of creating eco-gardens as part of the acceptable community for landscaping.

This is the reality I face, knowing that some people in power aren't comfortable with this soft revolutionary transformation to radically make a difference for the greater good of nature on conventional manicured lawn, which has been embedded for generations in the fossil fuel driven, chemically applied practice of making the land look neat, pretty, uniformed and delusively healthy.

10

Incongruous Entranceway Landscapes Receive Native Facelifts

Much successful conversion of the land, awards, and media attention had provided a confident boost to address two areas needing a serious natural overhaul (described in Chapter 14). Stretching from southeastern Wisconsin through northeastern Illinois and into northwestern Indiana, the Chicago Wilderness is a regional nature reserve that contains some of the rarest natural communities in the world. Embedded in one of North America's largest metropolitan regions, Chicago Wilderness is a mosaic of natural areas that includes more than 300,000 acres of protected lands and waters as well as many that are unprotected. These natural areas are home to a wide diversity of life: thousands of native plants and animal species live here among the more than nine million people who also call the region home.

With such a grand backdrop residents in their backyards, schools, park districts, corporations, places of worship, residential associations, libraries, nature centers, museums and city parks have been building on a greater community where nature is an integral part of the landscaping plan.

The Chicago Wilderness Consortium is an alliance of close to 300 public and private organizations working to protect, restore, reconstruct, study and manage the natural ecosystems of the Chicago region and encouraging private owners to enhance their landscapes with native plants, thus contributing to the conservation of global diversity while enriching local residents' quality of life. Setting the trend for a nationwide biodiversity recovery plan provided the necessary boost for my ecologically applied efforts to move forward to a more visible location. My homeowner's association became a member of the Chicago Wilderness

A front entrance island to 220 S. Roselle Rd. conveys an incongruent, dreary, overcrowded landscape of mixed chokecherry shrubs, yucca plants, a white birch tree and creeping junipers.

which served as a committed reminder for pressing ahead with bringing nature back to the region whether in the city, suburbs, or vanishing rural areas.

With such momentum now was the time to make a statement that the association was ready to fully endorse an acceptance to go native on the property. As people enter Town Square Condominium off the main road, they drive right by two separate islands on the front side of both buildings. Years of neglect and indifference towards these two front entranceway islands led to an unattractive site to behold. Chokecherry manicured to look like one gigantic amoebic shrub grew in an indistinct row in the background. Unchecked creeping junipers enveloped large rocks. Yucca plants sprouted up wherever there were openings. A single, tall, white, struggling paper birch, blocked out from the sun, stood barely visible in the foreground. No wildflowers bloomed on both islands throughout the growing season let alone any flowers except for dandelions. The islands on the inside of both entranceways had been impacted by vehicles driving up over the curb at least a foot into the landscape. A strange, dull mix of inappropriate plants

and degraded soil tarnished the view focusing on a nebulous theme of ignoring beauty, form, structure and purpose.

On one of the islands at the entrance stood a few lovely, mature white pines, creeping junipers and scattered rocks without much else to fill the void. So with the help of my conservation working supervisor Matt McBrien from Spring Valley Nature Center, we converted these two very conspicuous areas where cars would drive by while coming to and from home to park their cars outside in the back parking lots. I asked the association to get the hired-out landscapers to remove these chokecherries along with the yuccas, creeping junipers and paper birch, lightly mulch the area and we would do the rest.

The design was to awaken a landscape that draws pollinators, including butterflies and birds, by establishing a mix of native shrubs, wildflowers and grasses on both islands. Both sides of each island had a distinct range of light and shade that needed to be addressed to create suitable plants for those sites. The outer side of the islands facing east were sun friendly and

As the residents gradually approved native landscaping, the board and management agreed to convert the front entrance island into an open woodland, multi-seasonal landscape teeming with native wildflowers, grasses and a river birch with the backdrop exposing lofty white pines.

Within the inner island of the front entrance, during mid-spring, wild ginger hovers around large boulders sandwiched with Junegrass and shooting stars. In the background is a large healthy hummingbird attractant stand of wild columbine (*Aguilegia canadensis*), well suited to naturalizing in the shady rock garden and later to become an outstanding ground cover when the tubular red flowers fade for the season.

would invite more prairie and oak savanna conditions whereas the inner sides of both islands facing west shaded out by the buildings required more of a shade tolerant woodland setting. Although the new association management was receptive, the rest of the board seemed reluctant in displaying such a bold move, barely voting to approve this change. Nevertheless, the project received a sizable budget of several thousands of dollars for preparatory removal costs, and purchase and installation of appropriate native plants.

Dotted with regal, tall stands of white pines with half the day of pure sunlight on the exposed side and about a quarter day of sunlight on the inner side facing the building, we installed native shrubs as a "biohedge," creating a sense of enclosure with delicate native wildflowers blooming in the spring, edible fruits in the summer followed by nuts and seed pods in the fall to accommodate wildlife.

By late summer asters explode like a star-studded holiday celebration while the switchgrass and hidden black-eyed Susans find an illuminating way to join in the seasonal festivities of light, color and depth.

Bordering in the background on the hill facing the exposed side we introduced a dozen four-foot Nannyberry viburnums. Lightly mulched, we added scores of upland native wildflowers including black-eyed Susans, blazing stars, woodland phlox, grey headed coneflowers, Junegrass, purple coneflowers, wild columbine, shooting stars, and little blue stem. A pure delightful sight to behold but it was not easy.

The first two years of this project displayed a most promising if not ominous beginning. Unable to remove all the persistent yucca roots and chokecherry suckers while not applying enough mulch to keep down the weeds, I was constantly challenged season after season with removing those tenacious, established plants from returning while bindweed looped through half the landscape by mid-summer which required delicate pulling from the newly introduced, blooming native wildflowers.

Tall goldenrod and Canada thistle found their way too, which required constant surface extraction while the rhizomes and plentiful fuzzy seeds kept coming year after year. Successfully applying herbicides at an

As the light returned to the front entrance island so did the wildflowers with black-eyed Susans, prairie blazingstars, smooth spiderwort, and purple coneflowers providing a most magnificent display for the mid-summer season.

exponential level when the weeds barely appeared was extremely doubtful knowing how all the installed native plants would be seriously undermined. After all the labor and money put into this project, the soil had been tainted with a weedy residual gravel base and would require a complete overhaul. Furthermore, adding a few New England asters later turned into a dominant illuminating display of tall drooping flowers to the front of the landscape which required constant cutting back to balance the

Opposite top: **Leaving autumnally short dry prairie grasses like little blue stem and prairie dropseed to esthetically fill an off-season landscape on the front entrance site while allowing small scattered clusters of aster seeds to spread invites wildlife and birds to find shelter and food. The small boulders in the background provide a permanent addition to the ever-changing multi-seasonal composition of the landscape.** ***Opposite bottom:*** **Each early spring, the prairie grasses on the front entrance islands are ready to be trimmed down and bagged away or in this case a prescribed burn does the job (photograph by Mary Therese Jean).**

Early autumnal colors gloriously explode with sky blue asters, smooth blue asters bordered by *Nannyberry viburnums* in the background and a graceful drooping river birch warmly welcoming residents coming home on the front island.

overall appearance to the front entrance garden. As a result, I continued to hand remove these ominous, salient forces of incongruity for days at a time, each season, year after year.

Problematic Issues with an Epic Beneficial Weed

Dandelions were bountiful on the hill let alone everywhere on the property, impossible to remove unless by yanking them out by the root or by applying an effective broad leaf herbicide. I always have mixed feelings about removing this tenacious survivor that seems to pop up prolifically in the most barren, godforsaken corners of the earth. I remember a quote some contemporary anonymous author wrote: "Today there are more dandelions in the United States than there are dollars in our national debt."

Dandelions have undergone many "seasons" of reevaluation from

landscapers and protectors of native species throughout the U.S. Keeping the lawn mowed regularly to prevent the heads from seeding curbs the population while pulling the dandelions can be cumbersome, but it works as does smothering plants with a weighted piece of cardboard.

Before beginning to either uproot dandelions out of a back yard or chemically bombard them to death to maintain a pure green lawn, as witnessed so many times by the hired-out landscaper, it would behoove one to consider these attention-grabbing facts: Chemical analysis shows dandelion greens to be rich in Vitamin A, iron, and calcium. All of these help build strong blood, bones, and teeth and provide vitality. The bitter taste stimulates the heart and circulatory system.

Throughout the world, this modest sized plant appears in regions where the natural systems of balance have been disturbed. It is adaptable to just about any soil condition, and its toughness and resilience makes it one of the 10 most "noxious" weeds to eradicate. Gardeners and landscapers alike tend to fight the dandelion rather than understand that it grows to help restore conditions necessary for a diverse community of organisms. Botanically classified as *Taraxacum officinale*, the dandelion is a plant of the temperate zones, highly adaptable to Midwestern climate that probably originated in Asia Minor, but spread throughout the known world before written history. In the East, where the Chinese call it "earth nail," its long taproot and green leaves have been used for food and medicine since antiquity.

In the Mediterranean world the Greeks learned early to tenderize the leaves by bleaching, and ancient myths tell that Hecate, the goddess of earth, moon and the underworld, honored Thesues with a salad of dandelion greens after he had slain the Minotaur. In Rome too, the dandelion was commonly used in salads and stewpots, and when the Roman legions invaded the Rhineland and Gaul they rejoiced to find it growing there.

The Anglo-Saxon tribes who settled in the British Isles after the Romans withdrew used the dandelion to control scurvy and as a laxative and diuretic that increases secretion and expulsion of urine, thus helping the kidney to function effectively. In France the familiar pot herb was universally used and the Normans, who conquered England in 1066, devouring this potent edible to pump up the heart for combat, called it "dent-de-lion" because its sharply indented leaves suggested the teeth of a lion. The Saxon serfs soon modified the name to "dandelion," and so it has remained.

By the time the Puritans set out for New England the dandelion was considered an essential plant for food and health. As European colonists settled along the Atlantic coast, they continued to bring the dandelion for their gardens. Thus, the dandelion preceded the pioneers on their

westward migration and was waiting for them when they reached the new frontier, offering a food, a tonic and a mighty potent wine.

It is historically evident that every part of this ancient herb is useful in our modern world—its leaves, its blossoms, its roots, the latex of its vein, the very air it exhales. Even its long tough taproot is nature's way of aerating the ground for the short grass roots, thereby encouraging greener lawns and greater beauty. But that doesn't stop conventional landscapers with purist intentions to create green carpeted perfections from herbiciding vast terrain to remove this plant that simply won't go quietly into the night.

As a pernicious yet ecologically accommodating invader, dandelions are also a vitally important element of the diets for many flying and ground insects. Many types of bees and wasps, including the honeybee, bumblebee and bald-faced hornet, use dandelions as a food source. Other insects that eat dandelions include grasshoppers, mites, and beneficial pollen friendly beetles, fireflies, moths and butterflies.

Rabbits feast on dandelions constantly especially when preparing to give birth to their young. These brash unrelenting weeds are an integral part of the eastern cottontail which run rampant around the gardens and lawn in the spring. Grey and fox squirrels, mice and voles are also healthy beneficiaries of an abundant dandelion infested turf.

While dandelion flowers are an excellent food source for insects and mammals, the puffy parachute seeds are eaten by many species of birds. In North America, birds such as the American goldfinch, northern bobwhite, rufous-sided towhee and white-throated sparrow make dandelion seeds a favorite part of their diets. Dandelion fluff is also used as material for weaving nests by hummingbirds, sparrows, goldfinches, juncos, and chickadees.[1]

With our exploding human population and the proliferation of industry, housing and super highways, millions of acres of native wildflowers have been destroyed. Few cultivated crops are planted near urban and industrial areas, and over wide areas the wild bees are dying of starvation. But the dandelion, which will grow on practically every continent, has come to the rescue.

Perhaps the dandelion is nature's way of still laughing in the face of an artificial, chemically driven nation despite the growing loss of all her beauty and diversity. Out of a minimum disrespect for this undeserving treatment while avoiding a dominant proliferation of this species on the landscape, I only clip the dandelions after flowering and welcome their rooted contribution to keeping the native soils and native pollinators on the entrance hills and the rest of the eco-gardens aerated and healthy.

Within three years, the entrance sites finally flourished with colorful

fluttering pollinators galore, goldfinches hovering on purple coneflower stems, and peaking around mid to late summer with a diverse array of spectacular beauty. Make no mistake native gardening is not low maintenance when it comes to removing aggressively invasive plants on a regular basis which undermine the native biodiversity. Exposed to the winds of airborne alien seeds and tenacious invasive roots embedded from previous landscaped efforts, the two islands required continuous, multi-seasonal weeding to gain acceptance into transforming such neglected spaces into ecofriendly attractions.

Introducing a Birch Tree Closer to Home

The prominent transitional addition that made the site come to life throughout the four seasons was a delicate native river birch *Betula nigra* combining a beautiful exfoliating bark with silver dollar size leaves as a charming, ornamental, quaking umbrella. The character of the bark provides numerous nooks and crannies for hundreds of species of moths and butterflies to hide during the winter which allows birds like woodpeckers during the colder season to snack when the need is pressing. Having a low tolerance to heat and drought during the summer, the river birch prefers moist, acidic, fertile soils including semi-aquatic conditions. Commonly found in the upper Midwest, they do well in heavy clay and will tolerate poor drainage but keeping the roots soaked and moist certainly helps the tree grow in leaps and bounds to well over 70 feet in height. Pruning back dead branches and preventing suckers from shooting up are annual pervasive routine tasks. Attractive salmon-pink to reddish-brown bark exfoliates to reveal lighter inner bark. Dark green foliage turns a beautiful buttery yellow in the fall. Compared to other types of birch trees, this species is resistant to bronze birch borer.

Planting a Sloped Woodland Micro-Habitat

On the inside of our condo entrance side we planted a biohedge. While common snowberry shrubs (*Symphoricarpos albus*) may not be the most beautiful or best-behaved shrubs in the garden, they have features that keep them interesting throughout most of the year. The shrub blooms in spring, with small but dense clusters of bell-shaped, white flowers at the ends of the branches. In fall, the flowers are replaced by clusters of white berries. The berries are the showiest feature of the shrub and last well into winter. They provide food and shelter for birds and small

Spaced along the edges of both the inner and outer island gardens are introduced native shrubs like *Nannyberry viburnums* and the common snowberry (*Symphoricarpos albus*). Flowers attract rufous hummingbirds while the berries invite towhees, thrushes, robins, grosbeaks and cedar waxwings.

mammals. Bees, butterflies, moths and hummingbirds are attracted to the shrub. They also do well in exposed areas where they tolerate strong winds. Vigorous roots make the plants suitable for soil stabilization on hillsides and stream banks. Cutting them back every other year during the late winter to about a foot from the ground brings them back with a fresh healthy uplift.

Mature, enveloping white pines on the shadow side of the building adequately provided a partial sun to accommodate the woodland mix of grasses and wildflowers. We planted June grass, wild ginger, shooting stars, woodland phloxes, wild columbine and purple coneflower, followed later by a highly prolific blue stemmed goldenrod which ornamentally dotted the entire site in the late summer to early fall. With seeds that are easy to collect and propagate around specific woodland sites on the property, *Solidago caesia* is by far one of the finest understory forest dwellers you will ever introduce and a superb adapter to woodland edges in spotty

Trimming back the gardens in the late fall allows the trees, rocks, and shrubs to form a winter landscape with distinct beauty and definition.

shaded gardens. Found up and down the eastern North American continent, these clumping stems arch like Solomon's seal, illuminating with bright yellow tiny flowers where the nectar and pollen of the flowers can attract a wide variety of insects, especially short-tongued bees, wasps, and flies.

The caterpillars of *Gnorimoschema gallaeastrella* and other species of moths feed on goldenrods. Blue-stemmed goldenrod is one of the host plants of the leaf beetle *Microrhopala xerene*, the leafhopper *Prescottia lobata*, and the larvae of such polyphagous leaf-miner flies as *Calycomyza jucunda*, *Nemorimyza posticata*, and *Ophiomyia texana*. Other insects that feed on goldenrods (*Solidago spp.*) include aphids, treehoppers, spittlebugs, plant bugs, stink bugs, the larvae of fruit flies, and grasshoppers. The seeds of goldenrods are eaten sparingly by the indigo bunting, slate-colored junco, tree sparrow, Eastern goldfinch, and other songbirds. White-tailed deer, which never browse in this highly developed suburban residential community, are especially likely to feed on the foliage of goldenrods in large open woodlands.

No Native Garden Is an Island

Since the islands were constantly busy with cars, vans, trucks and buses picking up and dropping off people at both entrances, problems occurred in keeping the gardens protected from impatient drivers. Coming home from work at Spring Valley, I occasionally noticed huge gashes of tire tread marks in the soil, damaging the native plants along the curb. Knowing that most if not all drivers had little grasp of what I introduced to the land there, I decided to move midsize boulders into two opposite spots on both inner islands as a protective shield for bypassing vehicles by the entranceway. That way if these vehicles decided to go over the curb and into these native woodland plants, a price would be paid in dragging these strategically positioned rocks under their vehicles. Most of the time this worked exceptionally well except on rare instances where some large vehicle dragged the rock a few feet imminently scraping the underbelly of that truck or bus. Then I would sit with hands pressed firmly on the ground and push these garden guardians (each weighing around 250 pounds) with my knees back into place with my legs.

An Unexpected Bargain Leads to an Amazing Tree Addition

After a few years of cultivating the back side of the islands from both building entrances, much of the dominant plant species flourished including: Junegrass, wild columbine, little blue stem, smooth blue aster, blue stemmed goldenrod, wild ginger, and purple coneflower. I decided to purchase four small trees at a bargain price of $100 from a nursery which identified them as false cypress (Chamaecyparis spp.). However, as these four-foot saplings began to mature in the moist, mostly shaded soils one could detect by the leaves that the identification was incorrect. Dave Brooks, manager of Spring Valley Nature Center and an outstanding naturalist, identified the trees correctly as *Thuja occidentalis* or northern white cedar.

During pre–European times these trees were abundant throughout this region but were logged out commercially without regard for the forests. Rarely found in northeastern Illinois today except in protected preserves like Trout Park in Elgin, these state-threatened species stand well over ten feet tall, now creating a unique micro-habitat for birds throughout the seasons. And no one in the condo knows how significant these disappearing remnants living at one time for thousands of years by river forests were to the land. How could they know living in

a suburb designed to manipulate nature as if the evolving pollinators do not matter compared to preferable non-native trees, shrubs, flowers and grasses that perceptually "beautify" the landscape only to serve as extremely limiting connections to the ecology of the land. And yet, often as I pass by these lovely coniferous evergreens several feet from the potentially injurious edges of the entranceways, I recognize the plight they face in re-establishing themselves as part of our community. Taking the time to view the subtle sweet light upon the soft waving branches of the northern white cedar brings me to a place of serene joy, knowing they have a home, albeit small, here.

During the years when winter storms would cast a blanket of snow over these rare cedars on the islands or a bright morning dawn would cast illuminating glows over the front island native wildflowers and grasses, I would peer wondrously through my fourth floor window with a camera

The northern white cedar casts a soft, enveloping comfort over lustrous pearly-stringed, blue-stemmed goldenrod flowers and smooth blue asters on the inner front entrance island. Young pagoda dogwoods are brought in by seeds buried by grey or fox squirrels after devouring the berries.

and shoot photos of those intimate moments when one's work shines through the fluctuating reflections of the four seasons. I wondered. Am I alone in this personal bliss with these precious treasured secrets or do other residents also seize these intimate, contemplative, fleeting moments to make their days come to a deeper appreciation for where they live outside the walls of their insular climate-controlled condo units.

11

Shady Woodland Wonders Replace the Barren Scotch Pines

My life has focused on just a few things, and these all center on changing the course of hundreds of years of terrible land management in this country of ours. The species that once lived in our expansive habitats have been vanishing through the onslaught of industrial, residential and commercial disregard. Thousands of years of natural history in this place and millions of years of evolutionary history are disappearing with them. In just a few hundred years, look what damage has been done. Only a poor meager mix of a few scattered trees, some weeds and much bare ground remains for much of the Chicagoland area. Fortunately, that was about to change for the front entrance islands of this little condo spot in the suburbs. Before transforming the face of this depleted berm during the middle of the winter I spread ashes collected from the Spring Valley Nature Center log cabin fireplace. The periodic snows would eventually melt, settling these nutritional fixers. When wood burns, nitrogen and sulfur are lost as gas but calcium, potassium, magnesium and other trace elements remain. The carbonates and oxides in the ash are valuable liming agents that can raise pH and help neutralize acid soils where the scotch pines grew.

Covering an area approximately 625 square feet and receiving morning shade and a full to partial sun in the afternoon, a plan was designed to introduce nearly 400 native grasses, wildflowers and sedges covering at least 20 species for a start. An Adams crabtree remained as the only tree on the hill. During most of the growing season the sun partially shined on the site during the bulk of the morning, producing a partial shade to full sun on the southeast side by mid morning lasting through the afternoon with the building casting an enveloping shadow in the early evening. The conditions were excellent for micro-mimicking a plant community related

Removing the scotch pines from the targeted area, setting stone borders to introduce an upland native woodland garden, and prepping a periodic dusting of lime and ashes during the off season clear the way for installing a healthy mix of shady tolerant mesic prairie and woodland plant plugs. Located on the southeast corner, this lush native garden is ideally located for people entering the side door or just viewing from their close patio settings.

to the once grander and healthier open woodlands spread throughout northeastern Illinois.

Finding a Trusting Native Plant Nursery

Once again with the help of my working colleague/supervisor Matt McBrien from Spring Valley Nature Center we ordered the plants from

Opposite top: **By mid spring such lovely installed flowers as Jacob's ladder (*Polemonium reptans*) and prairie smoke (*Geum triflorum*) accompanied with complimentary scattered Penn sedges (*Carex pensylvanica*) begin to fill the once open prepared soil.** ***Bottom:*** **By early summer pretty common harebell (*Campanula rotundifolia*) adds to the site, growing profusely around rocks while a surging creamy yellow gentian (*Gentiana flavida*) inches toward a colorful awakening by mid- to late summer and are attractants for bumblebees and honey bees.**

Country Road Greenhouse nursery in Rochelle and began planting them on a partially rainy, early evening with our trusty dibble bars and trowels in late May 2013.

This dedicated prairie nursery deserves a note of gratitude. Larry and Sandy Creekmur founded this earth caring enterprise in 1982 and established a meticulous reputation of providing the highest quality native plants available at a very reasonable, accommodating price. In fact, Country Road Greenhouses, Inc. pioneered the production of container grown prairie plants in the Midwest. When they began growing prairie plants in containers, restorationists claimed it was not possible. From their experience, prairie plants had too vigorous a root system to be

Two years after introducing the new upland site, by mid-summer the site is flourishing with showy, tough, adaptable, pollinator magnet rough blazing star (*Liatris aspera*), hermaphroditic creamy pale yellow gentians (*Gentiana flavida*), patchy black-eyed Susans and a copious mix of woodland native sedges along with other wildflowers to cover the rest of the growing season.

grown in pots and had to be grown and sold as bare root transplants. Country Road Greenhouses, Inc., developed the process of growing prairie plants in open bottom containers to manage these vigorous root systems. "Prairie Plugs" have since become the benchmark for native plants in the restoration and landscape industries. Selling exclusively native plants, they have been committed to continuing to offer the quality, expert information, service, and value, gaining an endearing trust to the greater community. I see both of them as pioneering ecopreneurs walking the talk, practicing an exemplary way of living and working with integrity and time-tested knowledge.

I would continue to order literally thousands of plant plugs over the years from Country Road Nursery, knowing that the native plants they

Once prominently found in wet prairies along the Des Plaines River where dolomite is near the surface and throughout other northern and central Illinois counties under similar conditions, lime and ashes are used as a substitute to accommodate the large, sumptuous, perennial yellows flowers of prairie sundrops (*Oenothera pilosella*) on a sloped, partially-shaded berm by the condo building. Belonging to the evening primrose family, they are a true draw to rabbits munching down on the foliage, while bees, butterflies and skippers prefer to collect pollen and sip nectar.

nursed were in good, solid, caring hands for creating a "mom and pop" business as if Illinois' natural heritage matters.

The plant list on this prepared soil concentrated on a continuous unfolding of spring, summer and fall mesic and open woodland adapted natives to fill the hill, displaying diverse bountiful beauty. Spring flowers included shooting stars, wild columbine, Pennsylvania sedge, common wood sedge, rough clustered sedge, prairie smoke and Jacob's Ladder, followed in the summer by Junegrass, wild geranium, yellow gentian, tall meadow rue, Canada anemone, black-eyed Susan, foxglove beard-tongue, prairie sundrops and harebell, and finishing up with a stunning display of showy goldenrod, sky blue aster, smooth blue aster, and elm-leaved goldenrod. We worked for hours, well into the evening, before we finished the job and were blessed with a light rain during that time. All the plant orders were successfully planted and responded very well to their new home.

Not knowing what the outcome of this native mix would create, I observed the dynamics of how the plants interacted with each other and the soil. For example, long haired, puffy, wind receptors of the showy prairie smoke allowed the seeds to travel throughout the garden, spreading an unexpected, extensive seasonal ground cover.

Having laid out the foundation for a remarkably beautiful result, the land was prepped for a regenerative application. Accompanied by an outside ecologically applied service, after three seasons, on March 20, 2015, a prescribed burn was performed on the upland site, adding nutrients and clearing the ground for the growing season.

Making Sure All Concerned Parties Are on the Same Page or Else

The very next day, without posting a notification of this project, the hired-out landscaping company came in to spread weed killing pellets on the site, assuming the plants were weeds. Totally aghast by this mishap I immediately contacted management and Andy's Landscaping Company to remove every single pellet. Apologizing for this potential disaster, a working crew of half a dozen workers came out to carefully remove the pellets the next day without damaging any of the newly planted plants. It was so crucial to always check newly introduced sites daily on HOA residential property, knowing how difficult these unfamiliar plants were to adapting to a new volatile world of non-native friendly forces. During the next two years, I was to add Jack in the pulpit, blue eyed grass, wild nodding onion, New England aster, common spiderwort, blue stemmed

goldenrod, and wild ginger taken out of a garden along a garage belonging to one of our longtime volunteers.

The key to this amazing composition successfully enduring the first season was in generously watering them every other day for a month or whenever a hot stretch of dry weather occurred, checking daily for adequate moisture in the soil. That late spring the area was blessed with continuous showers that greatly helped the roots to establish themselves. I lightly mulched around the newly planted natives, occasionally weeding out the thistles, and carefully herbicided rooted suckers of locusts with a dabbing cloth.

Besides the Canada thistles and the honey locust suckers popping up from their distant roadside location, the garden flourished with a glorious, abundant understory of depth, complexity and beauty inviting pollinators to fill up at this most amazing butterfly way station. Each early spring afterward, a prescribed burn was performed on the site. The first burn on that site proved that I would never again do it alone but would work under a professionally hired-out, ecologically responsible company to do the job.

Bureaucratic Hassles and Prescribed Burns

Knowing that I was allowed to burn with very little red tape throughout designated sites around the two condo buildings for years facilitated an ongoing open burn permit process from the state, county, and village, but now I was required to take extensive exams from the village which seemed far too excessive for the total acreage of this piecemeal targeted land that I was overseeing on the native landscape.

The fire marshal made it perfectly clear about the new guidelines needed to comply with the village in a letter dated April 2014.

Dear Mr. Paige,

The Illinois Prescribed Burning Act (525 IL CS37/) outlines the requirements for prescribed burning as a land management tool. The act includes the qualifications for a certified prescribed burn manager. Based on the qualifications and requirements listed in this act and pursuant to the permitting requirements identified in the Village of Schaumburg Code Section 91.03, the following qualification will be deemed acceptable for individuals responsible for open burns:

**Certified prescribed burn manager or*

**Written consent from the landowner with completion of the following National Wildfire Coordinating Group Wildland Fire Training Courses:*

Firefighting Training (S-130)

Wildland Fire Behavior (S-190)

Either of these options will satisfy the credential requirements of the person in

charge of the burns; however, all items on the attached check list must be provided in order to receive a local burn permit.

Michael Rons
Fire Marshal
Village of Schaumburg

With a restricted window of opportunity for performing prescribed burns under the Cook County Environmental Affairs Department which required a fee and now possibly paying for extensive courses fit for fighting a national forest, I began to surrender ever doing the burn alone again.

However, on the last farewell day of doing the burns alone, and with all the bureaucratic hoops to jump hovering over a scheduled burn, I asked my manager Dave Brooks to vouch for me that I had over 20 years extensive experience in assisting prairie burns at Spring Valley Nature Center. He promptly submitted a letter describing my extensive experience, mentioning that I had received a burn certificate for attending a Chicago Wilderness workshop.

Having only half an hour to spare, otherwise the burn that day as well as the season would have to be postponed, I submitted the letter from Brooks to the fire marshal. Waiting for an answer at high noon I was given a special visit to the new shady woodland berm where the top battalion chief hand delivered a burn permit waiver to me to go solo one more time with a propane torch, a flapper, a hooked-up water hose and a rake. After that day I was to subsequently assist a hired-out, ecologically-based landscaping company based in Schaumburg which would manage the burns and hire me as a temporary crew member to cut the costs for my homeowner's association. The board approved this changing of the guard without any dissenting votes. The passing of the torch had arrived.

Within two years, the hill was surprisingly stunning, beckoning me to visit constantly to make my day complete. Normally, burns are performed after the first three years but the plants established themselves so well, the burn was able to remove any annual weeds and clear the way for a native vision to captivate the residents during the second growing season. Nevertheless, there were always those invasive continuous pickings of Canada thistles and honey locust seedlings dropped from an adjacent parent tree where the burns missed their intense effectiveness that would find their way back to once disturbed soil. Walking delicately on my toes like a martial arts student, I would try not to step on any natives while yanking these unwanted aliens from a wonderful grand awakening.

Truly this was one of my favorite landscaped sites for bringing nature back, continually beckoning me to go deeper, embracing these indigenous wild plantings with gratitude and an unspeakable sense of mysterious reverence. An embryonic, inter-woven micro open woodland

community landscape just a few feet away from conventionally uniformed bush honeysuckle shrubs bordered around residents' patios. It was a striking contrast between living and static, one dimensional landscapes. Watching the late afternoon light gleaming on this upland slope, I could feel the pulsating depth of what was unfolding: a restorative little healing plot on the pale blue dot imbued with a beautiful, resilient, colorful eco-garden filled with a rich mosaic range of pollinators and pollen friendly species sharing in this multi-seasonally dynamic creation.

12

If You Build Micro-Habitats, They Will Come

If you have been fortunate enough to nurture your land through the years to bring nature back, then I am sure you also have many stories to share about encountering wildlife. I was incredibly lucky to have such countless moments over my career of following my passion. Nothing could be more comforting as a naturalist and conservation practitioner than to witness the return of birds, mammals, and insects once a living part of the land for thousands of years. It brings out the primeval side of my being.

For example, one afternoon during an unseasonably wet summer, the tall meadow rue (*Thalictrum pubescens*) rose to well over six feet. While observing this stunning, towering, pluming king of the meadow in one of the green ash woodland eco-gardens I saw a huge, black, nearly eagle sized bird flying along the wing of the condo complex heading straight toward me. Landing on a limb directly above where I was weeding, the unimaginable happened. In over 20 years at our nature center, these birds were never reported landing anywhere on its 138-acre reconstructed woodland, wetland and prairie with bountiful stands of various tall trees. And yet this lone raptor landed right above me.

I could vividly see its naked small shriveled red head while this scavenging adult lay still, sheltered from an intense sunny day. That moment lasted no more than 10 seconds when out from an adjacent tall spruce tree flew a Cooper's hawk in a furious quick confrontation. Known to be very unintimidated with larger birds of prey, the turkey vulture was extremely agitated by this aggressive, boisterous calling of "cack cack cack" and "kuck kuck kuck" and abruptly left this momentary comfort spot in pursuit of a quieter, more amiable location.

The soft white plume of the Tall Meadow Rue marked the spot just above this towering plant where a turkey vulture landed for a fleeting, awesome, rare moment on the limb of the ash tree.

I realized that this bird of prey was quick to defend its territory, instantly chasing the vulture away from the entire back grove of ash trees nearly a block away from the condo property. By building a micro-habitat mimicking some of the familiar natural surroundings, the vulture felt comfortable to take a breather from a long scorching day in the burbs on a green ash limb above a mid summer woodland eco-garden composed of royal catchfly, purple coneflowers, hollow Joe Pye Weed, licorice tasting medicinally sweet cicely (*Osmorhiza claytonia*) and tall meadow rue. Too

bad the Cooper's hawk did not have the territorial patience to give the vulture a peaceful respite there.

A Stunning Eight Legged Resident Creates a Teachable Moment

On another occasion, in a small prairie garden surrounded by the early autumnal unfolding of Indian grass, switchgrass, and big blue stem, there one day lurked a most impressive yellow, ornamentally mosaic, bulbous Argiope spider (*Argiope aurantia)* spreading her meticulous extensive web fastened to these tall native grasses. She could be seen weaving, repairing, storing freshly captured insects, or just spreading her eight legs strategically equidistant in the middle of the web to catch the slightest vibrational tug.

I found out later that all of this activity was being viewed through a young child's bedroom window. One day while weeding around this tall grass prairie garden a resident father came up to me and wanted the spider removed, afraid she would enter the house and bite his son. Before there was the adorable story *Charlotte's Web* by E.B. White, there was Little Miss Muffet. I grew up with that dreaded nursery rhyme implanted in my impressionable early memory bank. Now, I know that some of my best non-human friends in the wild and in my house may have eight eyes.

I explained to the father that seeing the intimate detail of how this beautifully patterned orb weaver lived would be a wonderful teaching opportunity since his son could look through the window and not worry or feel threatened. An unforgettably fascinating experience with just a brick wall and a large window separating two very different worlds. One sheltered from the outside world filled with electronic gadgets and artificial comforts, the other totally embracing the resourcefully dynamic outdoor forces of living in a prairie garden. Yet there is a window of opportunity inviting the child to cross over into an amazing world of complex natural wonder.

As ingenious hunters and engineers, these exquisite arachnids rest totally still, waiting to ambush an unlucky insect that flies into the sticky silk radiating out in circles from the center of the web. Once the spider feels the vibrations caused by the hapless victim, it moves quickly along the non-sticky cross hairs of the web to subdue its prey with venom. Sometimes the prey is poisoned, killed and eaten on the spot, while other times it is paralyzed and mummified in a silk case where it remains comatose until it is killed outright with poison. The spider then uses enzymes to liquefy the prey's body before sticking it into the mouth.

Despite these hard to swallow qualities for us humans, spiders are nonetheless a true wonder to behold. Although many people today react to spiders with much apprehension and disgust, Native Americans reveal through their storytelling that they saw virtue in the spider's keen "trickster" awareness, its patience, and the intricate order of its territorial existence.

Personally, the web signifies the work I have woven into the community to be a part of nature and the stems that hold the web together represent the needed support to make that wondrous cooperative mystery unfold.

Spider webs are a symbol of the interconnectedness of all things both dead or alive. Even today, in our fast paced, short attention span society, we can learn from the spider's example of watching and waiting. We can temporarily suspend our attachments to multi-media fixes and quiet our inner voice to let the stillness divulge something about deeper living with intention.

For a child to see firsthand through the window how a spider relates to the rest of nature is an experience he will surely remember. Imagine watching the full process of how an orb weaver hunts and feasts on grass hoppers, crickets, moths, flying beetles, butterflies and leaf hoppers in a prairie plant community.

After discussing at length the beautiful opportunity for his son to peer through the window at such complex wonder, the father never approached me again. One would only hope both he and his son were bonding together viewing this captivating spinner with open eyes of awe and curiosity, while the native grasses resplendent with rustic seasonal colors radiated through the prairie garden, and were softening their fearful prejudices of how nature works.

A Wildlife Secret Not Shared with the Residents

Later that fall when the season was in full dormancy, and only the prairie grasses were standing tall with their dry, wind resilient, sturdy stems and patchy beds of packed remains, just below that window where the *Argiope* spider made her home lay a pile of scat the likes I have never seen on the property before. Years ago dogs were allowed to live in the condos, but were prohibited due to various irresponsible residents leaving their canine pets to plop their feces on stairwells and door entrances without cleaning up. I knew that what I saw years after this change of rule was not dog scat.

Furry scat, cigar shaped with twisted ends, lay hidden in the compressed prairie grasses along the brick wall. During the warmer seasons a

black cat owned by one of the residents would be allowed to go outside and wander around the patio area. Occasionally, I would notice that cat sitting in the very same spot where this wild canine dropping lay. What I saw that day I would never share with any of the residents at Town Square knowing that fears could run rampant and, being concerned for the children, they could imminently demand the removal of the prairie gardens. Keeping secrets between yourself and what you encounter in nature can be a wise move.

It is hard to imagine in the heart of suburbia, surrounded by residential and commercial buildings, that coyotes roam at night when the lights are out or when people are glued to their TVs for nightly entertainment. Originally, they inhabited the prairies and were commonly called prairie wolves. Now they can be seen almost everywhere in the country. What a remarkable comeback for a predator that constantly shakes the very foundation for how to survive in one's native land.

As superb scavengers, thanks to a sharp sense of smell, they will eat live or dead animals, mostly rodents like rabbits, mice or voles, but also fish, birds, snakes, bats and frogs. Moreover, they will eat garden vegetables, insects and even animal droppings. Coyotes are indeed opportunistic and have been known to chow down on small pet dogs, fawns and declawed cats in the suburbs. In short, there was no way I wanted to alarm the residents on such sightings unless something happened to legitimize such concerns.

Creating such a small, very highly diverse prairie garden invited this coyote to mark a territory with scat claiming a strong liking to this little earth caring, native grassy spot. As human beings have altered the land from prairie to stripped dead zones, then let it return to a mixture of introduced scattered prairie and woodland landscapes, wildlife have had to shift and find new balances in response. Now the coyote or *Canis latrans* was a secret nocturnal guest invited to return to a cozy little natural space while the residents unknowingly sleep in their bedrooms alongside its presence.

Coyotes let us know that the mental boundaries we maintain between the human and the wild crossover more than we may have ever imagined. In the midst of our attempts to control the suburban landscape, to put humans here and nature there, coyotes express an alternative set of impressions about boundaries. If we open our eyes, ears, and minds, a world full of coyote awakenings await.

The trickster coyote's real-life descendants now populate nearly every city in the United States. After being driven away, scorned by ranchers and farmers, harassed, subjected to chemical warfare, demonized, and half-forgotten by urban dwellers, they will not surrender to human

domination. I get the sense that they'll keep finding their way among us, almost as if they are on a mission to shake the very foundation of who we are. This densely human centered world, this land is not exclusively yours, they seem to say; we'll keep coming back until you get it.[1]

Echoing Caws Add Drama to a Quiet Living Landscape

Some natural wildlife encounters become almost routine. For example, a resounding spectacle of exchanged caws alarmingly echoes off the five-story condo building walls in late spring ready to defend their embedded homeland.

Perched on mature weeping willows close to a young swamp oak where the deafening voices were directed are a few adult *Corvus brachyrhynchos*. Birds and mammals have been alerted. A familiar predator lurks in their territory close to their breeding grounds. A harbinger crow has spotted an immature red-tailed hawk perched on a branch and has summoned all crows roosting nearby to join the clique and mercilessly annoy the inexperienced, unfortunate raptor.

Such mobbing behavior is probably the most frequently observed overt anti-predator ploy. In the weeping willows where several large, twig-twisted nests have been established over the years, mobbing functions to divert the predator from attacking the nests where there are fledglings or simply to confuse and agitate the predator in the hopes of swaying the hawk to move away.

In a quick display of defense, the intimidated bird of prey leaves the branch trying to acrobatically shake them off, but fails miserably, being outnumbered and out shouted. Soaring above me while I stand in awe on the site by all these native trees that I introduced on the south end of the 300 S. Roselle Road complex, the dramatic exchange electrifies the sky. A murder of crows around the neighborhood rally to the cause, flying and shouting around the hawk to the point where the raptor has no choice but to flee from the enormous cacophony and fellow backing among them.

All year round I am constantly on the lookout for these exceptionally smart, resourceful survivors. Not having to move into the native woodland grove, the crow families are perfectly comfortable over the years nesting in the established willows on the sloped lawn but now they have other fleeting birds of interest perched on young oaks nearby. And some of them may not be understandably welcomed as tolerable friends in the neighborhood. Territorial boundaries are being redefined and protected.

Goldenrods Are Magnets for Mysterious Bubble Making Insects

In many morally strict places of the world like Singapore, it is a crime to spit in public. There, one could face a stiff fine and a short jail sentence for demonstrating in public a healthy globule of saliva before the eyes of the authorities. However, imagine living in your own saliva in order to keep yourself cool and moist in the summer and you will have imitated another fascinating spit-maker that does just that—a small green insect with a smiley little frog face.

As wonderful insect pollinator attractants, the Solidago family or goldenrods are also Midwestern homes for the innocuous spittlebug (*Philaenus leucophthalmus*), one of among over 50 species of spittlebugs in North America. Appearing mostly on goldenrod plants and various tall grasses and sedges in the open fields from May to August, these slippery, foamy bubbles can easily be interpreted as spit from a dehydrated human. I see them in the Town Square Condo prairie gardens on a variety of different goldenrods. Nevertheless, they are made by the youthful stage of an insect which as adults become froghoppers, akin to cicadas, aphids, and other sucking insects, all of whom experience an incomplete, three stage metamorphosis.

During the growing stage between the egg and adulthood, the froghopper nymphs do not look much like the adult insect they will become. The froghopper is a small brown creature that leaps from plant to plant, appearing like a miniature frog, while the spittlebug is pale green, has a tiny, frog-like face and hides within the safety of its self-made "spittle."

Only one other insect in the animal kingdom, a wax moth caterpillar, produces a home composed of spit. With perhaps well over five million different species of insects in the world, spittlebugs are given the rare chance of building their homes from literally their own creative "juices." They manufacture their spit from plant juices they suck and from a waxy ingredient produced by glands in their abdomens. The two mix and are excreted as a clear liquid.

Air blown out through a special pump like structure beneath the abdomen produces bubbles in the liquid one at a time, all of an equal size, eventually creating the conspicuous frothy appearance of the spit. The spittlebug usually perches head downward on the stem, letting gravity pull the protective spit over its body. The egg-white, spitty coagulant serves the growing spittlebug in several ways. First, the homemade substance provides a way to rid itself of excess plant juices. Inside the mass of spittle, the spittlebug has a beak-like mouth submerged in the plant stem and spends

most of its time sucking liquid. Secondly, the spittle creates an insulated world, moist and cool during the hotter days, for the young insect to dwell in while maturing. This environment is so crucial to the spittlebug that whenever it moves to a new part of the plant without hesitation, perhaps within about five minutes, it makes a new spittle mass.

Lastly, the spittle protects the spittlebug from predacious visitors. The spittlebug's only known predator is a species of a beneficial pollinator wasp (*Ichneumonid*) that senses the spit as the source of a good meal to feed its young.

At first I found the salivating actions of the spittlebug slightly repulsive, but after observing and studying the behavior came to the realization to accept it as a clever evolutionary way for the insect to protect itself during its flightless youth. For whatever my assessment is worth, they can spit anywhere they want in my eco-gardens.

Little Beacons of Wondrous Light Dot the Evening Landscape

Taking years to recover in open, moist, tall grassy woodland meadows from soil disturbance due to mowing and habitat loss, I was so delighted to see scores of fireflies dancing under the immature swamp white oaks, in prairie garden and over the swale during dusk in the summer. Using the native gardens as safe havens, these glowing insects brought a sparkling show of dazzling illumination on warm sultry evenings. Also known as lightning bugs, they are really a type of beetle with a fantastic ability to make their posterior glow.

When you watch a firefly, you are witnessing a chemical reaction. A substance called luciferin is stored in the beetle's light organ. The light organ has many air tubes in it along with reflectors. When oxygen and luciferin combine in the presence of enzymes, light is produced. The reflectors help to disperse the light.

Luciferin, along with its companion enzyme luciferase, is used in medical research on cancer, multiple sclerosis, cystic fibrosis and heart disease. The research chemicals still have to come from fireflies since scientists have not been able to produce the chemicals synthetically.

Fireflies control the light by how much and how often they let oxygen into their light organs. Now you may ask, "Why do fireflies go to so much trouble?" Finding a mate and finding food make the world go round so that's always a good guess. Fireflies flash to attract a mate. And not just any mate but a mate of their same firefly species. The flash code is very specific to the species. For example, with one species found in Illinois, *Photinus*

marginellus, the male flashes start between sunset and one-half hour after sunset. At 74 degrees F a single male flash is repeated after 3.5 seconds. The female response is 30 seconds after the male flash.

Typically, after sunset the male firefly patrols grassy areas while he flashes his code. The females hang out on low vegetation and if she is interested she flashes back the same signal. I'm not sure how the females rate the males, perhaps its firefly flare and finesse. After exchanging signals about five to 10 times the male finds the female and then it's "lights out."

Adult fireflies eat small insects if they feed at all. They don't bite people. The young fireflies live underground in undisturbed soils and don't look anything like their parents. Their larvae, spindle shaped bodies glow continuously and are often called glowworms. They use their sickle-shaped jaws to inject a toxin to paralyze slugs, snails and other immature insects they find in the soil. The toxin also liquefies the insides of their prey so glowworms can enjoy a slug smoothie.

Females of some cannibalistic species have learned to mimic the flashing patterns of males of other species. She flashes an enticing invite, he flies to her and flashes, "Well, hello?" and she eats him. Adults of other species subsist on pollen and nectar from flowers and some don't eat at all. There are about 2000 species of fireflies and yet most are undergoing a collapse in their kind due to habitat loss and pesticides.[2]

Knowing how rare it is to witness such a nocturnal gala of flirting glows, I would stand still many evenings captivated by this serious mating game which would last into the late night. I seldom saw anyone sitting on the patio gazing at the blinking light extravaganza of the fireflies in the darkened, designed woodland grove by the bioswale as a vicarious replacement for a vanishing night sky due to light pollution, contrails, and haze. Amidst such rare evening enchantment people nevertheless seemed buried in their domestic cocoons, viewing their captive electronic light in the entertainment box to find their artificial sense of illumination.

Just When You Think No One Is Spotting You

Usually when I started my day, I would walk down the stairs to get my newspaper in the lobby entrance and then walk into the waiting room to the office where the window faced into the lush native garden site I call Little Jurassic Park. One pre-dawn morning in early May with barely any light to be seen, I saw hopping on the outside window ledge a little solitary bird that appeared to be rarely if ever seen in the local woods around here, let alone a condominium complex.

The shadowy figured bird gave a quick flick up of its russet tail, and

then gradually brought it back down. As the light in the lobby dimly shined through the outside window sill, I could see it had a brown back, head and wings. When its head bobbed up again, it was facing me through the window a few inches from my eyes and I could see a white breast with black spots that gradually gave way to an all-white belly. I was looking at a hermit thrush (*Catharus guttatus*). In all the years I worked at Spring Valley Nature Center I never saw one and was told that you could only see them in secluded, rich native woodlands where the underbrush is thick with coverage. With long legs kicking through the decaying debris to grab food with their slender bills one could be lucky enough to spot these distinguished thrushes.

As an Audubon volunteer birder, I was looking forward to hearing this haunting, flutelike glorious voice through the window but the darkness did not invite the bird to awaken the neighborhood. Too bad. I had to go to work at the nature center otherwise I would have followed this sweet-sounding thrush when daylight appeared to hopefully catch the unmistakable mating or territorial heavenly melancholic song.

To see the hermit thrush only inches from my eyes, I can only say that the little native micro-habitat garden was a beautiful gateway to entering this bird's world. Maybe the bird was hiding in the backside of the micro habitat garden where the ostrich ferns, celandine poppies and mayapples filled the ground to avoid the open lawn from being spotted. Little did it know while perched on the outside window sill, that I joyfully viewed its fruitless attempt to hide.

A Majestic Migratory Moment Close to Home

Many suburban and urban folks on a daily basis face the hard reality of a commercial, residential and nature stripped landscape, hardened by interlocked wide asphalt roads, removed from the subtle, seasonal pulses of earth's cyclical wonders. Preoccupied by "consumavore" driven needs, people in these artificial environments are distancing themselves from immediate daily affinities with the natural world. That was the reason I intended to create micro habitats and native eco-gardens on the condo property. My intention was to bring nature back from a stripped, ecologically despoiled earth but I had no idea I would be attracting a magnificent grandeur from the sky on a regular seasonal basis.

From early March to early April and from mid–September to late November, I witnessed unforgettable sights and sounds circling low over the condominium complex, reminding me of Aldo Leopold's words: "We hear the trumpet in the orchestra of evolution. He is the symbol of our

untamable past, of that incredible sweep of millennia which underlies and conditions the daily affairs of birds and men."[3]

At times I would be preparing for a seasonal spring burn and see the sky come to life with high pitched rattling of kar-r-oooo sounds overhead. Gazing up I could clearly see a few hundred feet above me a flock of *Grus canadensis*. Spellbound but not speechless by their attempt to sense this newly reconstructed native landscape, I always called back to them as they gracefully spiraled low over this patchy micro habitat community. People coming out of their cars in the parking lot, children playing on the grounds or pedestrians walking to and from local stores seldom looked up to see the sandhill cranes, ignoring this phenomenal primeval flight formation. Having a seven foot wing span with a height of four feet, viewing their tribe in large numbers becomes impossible to miss unless they are off the perceptual radar of what you consider interesting as a part of your life experience.

Like noted conservationist Aldo Leopold, my appreciation for the sandhill crane "grows with the slow unraveling of earthly history. His tribe, we know now, stems out of the Eocene (60 million years ago). The other members of the fauna in which he originated are long since entombed within the hills."[4]

In the Windy City land of fragmented, individualized, highly maintained chemically induced landscapes, people learn to bend with the wind, molding their own environments to enhance their perception for the aesthetics. Yet very seldom do urbanities, let alone suburbanites, look to the sky to watch a world of graceful, poetic motion created before the dawn of Homo sapiens.

Just for a short few moments these flocks circle ever curiously closer as if to land in one of the open areas between the micro-habitats but decide to move skyward toward a broader area receptive to Mother Earth's grandeur. In the 29 or so years that I worked at Spring Valley Nature Center, less than a handful of cranes on its 139 acres of mixed prairie, woodlands and wetlands have ever touched the earth. And yet, they hover over to wonder if these minuscule evolutionary traces over Town Square would be inviting enough for a temporary rest stop.

The Answer Is Blowing in the Wind or in the Dormant Soil

Encounters with plant life don't often feel to us like "encounters," but perhaps they should. Not every notable encounter I've had over the years in stewardship efforts has been with legged or no legged creatures.

Even native plants I did not introduce found a place to grow like the tall fast spreading drought tolerant sawtooth sunflowers (*Helianthus grosseserratus*). They managed to find a spot to spread their perennial kind in the partially shaded, moderately moist stretch of the bioswale. The most common cross-pollinating visitors to the flowers were bees, especially long-tongued species. Among these are honeybees, bumblebees, and carpenter bees. Other insect visitors included Syrphid flies, bee flies, butterflies, moths, and beetles. Both nectar and pollen are available as floral rewards. At the peak time of the blooming season in mid to late summer these bobbing flower heads become wonderful sights for watching monarchs and swallow tails dance through the waving stands.

In the fall when the flowers turned to seeds, goldfinches and song sparrows would find outstanding sources of nutritional benefits while flipping the shells and remains for the prairie voles to salvage for an immediate snack or to be stored for the colder seasons to come. With aggressively deep, creeping rhizomes to establish an embedded resistant stand, I would

Riddell's goldenrod, sky blue asters and a surprising biennial gaura (*Gaura biennis*) introduced by the wind and other methods producing orchid like flowers until a hard frost. Numerous species of moths, long tongued bees, and bumblebees thrive over these flowers.

dig around them with a spade shovel to cut off their spreading into other native plants in the swale. While these tall bending flowers settled over the lawn on the edge of the swale, they would eventually meet their fate by the lawnmower to keep them in check.

Another surprising plant that grew on the drier, more disturbed downside of the swale bordering along the lawn initially appeared to be an inconspicuous weed which instinctively made me want to yank it out. But I waited and was delighted to have made the right move. Biennial Gaura (*Gaura biennis*) forms orchid like tiny flowers in the hot and dreary late summer and will continue until a hard frost. They do not spread very fast and integrate very well by the dense diversity of the swale where the Riddell's goldenrod, evening primrose, heath aster, wild bergamot, smooth blue asters, and Culver's root blend colorfully together. Bumblebees seem to thrive over these flowers for several weeks.

Introducing Bat Homes as a Natural Mosquito Abatement Addition

One sultry evening when you could feel the intense humid aftermath of a summer thunderstorm I saw a little brown bat (*Myotis lucifugus*) hovering around the bioswale attempting to voraciously swoop up mosquitos and moths. A year earlier I had installed a bat house on a swamp white oak in the woodland grove to accommodate little brown bats in this young micro habitat community. As one of the most common bats in North America, they are an important link to healthy ecosystems, controlling insect populations, serving as nectar feeding nocturnal pollinators and seed dispersants for countless native plants. It is not uncommon that lone bats serve as scouts to check out sites for colonies to relocate.

Working on a consensus basis each bat in a colony must feel comfortable about relocating and that takes time, sometimes up to two years

Opposite top: **Allowing the native wildflowers to spread their wind borne or wildlife dispersing seeds around non-native gardens adds a complimentary, fresh vibrant character to once conventionally static settings. Seen here is an assortment of sweet black-eyed Susans and smooth blue asters highlighting rose bushes next to the upland open woodland garden site.**
Bottom: **Unintroduced hearty clump of common blue-eyed grass (*Sisyrinchium angustifolium*) found a spot to propagate between creeping junipers in a sunny, well-drained, pebbled surface garden. A member of the Iris family most likely introduced by seeds from birds, these once thriving prairie star grasses, as they are commonly called, tend to open flowers in the morning and close in the afternoon.**

before everyone feels agreeable in moving to a new home. That night was the only time I ever witnessed a bat freely flying around the native landscapes although there were times I had to relocate little mouse eared bats from the elevator lobbies and on hallway ceilings in the condos to an undisclosed wild place.

Seeing that little, hungry, hyper flapping bat gave me hope that one day a colony would arrive. But then again why would a bat colony choose to be in a bat house on a climbable tree, subject to predators like raccoons and shaded out from sunlight from keeping their thin fur bodies warm? Consensus decision making not to live in that black box on the swamp white oak was probably a wise choice.

Above all, know this: If you build these micro-habitat eco gardens there is an outstanding chance nature will listen and return with much welcomed diversity to share within an interdependent web of life. That is a simple yet important lesson to know. We experience a living cosmos joyfully by fully embracing a growing ecology in our immediate landscape.

13

Stewards of the Land Are Still an Endangered Species

Volunteer stewards to the land are like endangered species. They carry a committed, full four season understanding of natural history to remembering the intimate co-evolutionary connections through diligent conservation and preservation practices, sustaining an ecologically healthy preserve through time and space. Their mind, body and spirit are interwoven in the genuine love for bringing back balance and evolutionary integrity to restoring and healing the earth. They are rare examples in the human race of what it takes to bring nature and ecological sanity back to a community. If they do not pass down this treasured wisdom of the land, just like an endangered species, the ecosystems will degenerate and become extinct. Without the earth stewards, the remaining fragmented land, nurtured both by Mother Earth and humans, is imminently forgotten, subject to the whims of commercial, recreational and residential development and removed from nature's complex community of soil, plants, minerals, and wildlife.

One such person is Herb Demmel. As a steward with the forest preserve districts of Kane and Cook counties, he gradually shifted from working in the corporate world and teaching night school at Elmhurst College to spending more time outdoors with nature, volunteering in prairie and woodland restoration.

For over 10 years, this soft-spoken man with a New York City accent he still holds onto since his childhood years in the Big Apple, has almost single handedly been overseeing a five-acre woodland remnant owned by the Friendship Village Retirement Community. He has devoted his retirement time to preserving a small area that was part of a much grander forest in Schaumburg known as Sarah's Grove. The project started originally

Dedicated stalwart conservationist steward Herb Demmel stands among a preserved shagbark hickory and a few white oaks, some of which are close to 300 years old, in a high-quality woodland remnant at his Friendship Village Retirement Community in Schaumburg that was subsequently devastated by a once-in-a-century microburst in 2017. As Herb views this development, opening up the woods precipitates a new dawn of understory light inviting new oak seedlings and an explosion of wildflowers, sedges and grasses to challenge keeping up with this unexpected cyclical transformation.

in the mid–1970s and over the years became terribly neglected but thanks to Herb, the vision kept going. Herb is someone who has a sense of what to do seasonally to make this unique hickory-oak forest remnant come to life. That means removing poison ivy, buckthorn, black locust sprouts, and the nefarious garlic mustard all contributing to the degradation of these woods.

By adding two thirds of a mile of footpaths and applying controlled burns and spotty herbicides, the appearance of the woods has dramatically changed back to what might have been a couple centuries ago. Now there are encouraging signs that the bur oaks, shagbark hickories, swamp white oaks, white oaks, hackberries, red oaks, and hill oaks some dating back well over 225 years ago have a chance to survive and propagate. By improving the ecological sustainability of the forest, Herb has reignited a dormant understory, undermining a once dominant spread of invasive non-natives. Now you can see wild columbines, celandine poppies, elm leaved goldenrods, Virginia blue bells, mayapples, spiderwort, tall bell flowers, bloodroot, white/red trilliums, trout lilies, broad leaf puccoons, spring beauties, Virginia waterleaf, Dutchman breeches, golden alexanders, shooting stars, blue cohosh, white baneberry, early meadow rue, Solomon's seal, false Solomon's seal, wingstem, wild bergamot, Jack in the pulpit, tall white lettuce, Joe Pye weed, zigzag goldenrod, purple hyssop, hazelnut shrubs, golden glow, woodland bromes, Canada wild rye, Pennsylvania sedge, and one especially memorable plant, horse gentian that caught my fancy. Our conservation crew would occasionally be invited to transplant native plants subject to becoming disturbed by new trails at Friendship Village. It was then that I studied the ecological fabric of Herb's caretaking forest and attempted to mimic this rich, multi-seasonal plant community at Town Square Condominium Association. Herb's expertise on knowing the native woodland plants and what would be the best location for them certainly helped me fill in the ecologically barren terrain around the condo.

When he offered me a rare plant to introduce at Town Square Condominium, I was quite intrigued. A plant that produces orange beans which could be grounded into coffee caught my attention. It is called common horse gentian (*Triosteum perfoliatum*) and I began to wonder if by chance I could grow enough beans to produce a genuine cup of native Illinois coffee. Transplanting them in front of a secluded building garden established to introduce other woodland natives, I saw these two potentially brewing transplants produce a small but very prominent display of orange beans. I left the plants alone until the next year, assuming they would spread well in this replenished black fertile soil.

That mid summer a gentleman hired by the management happened

to be installing a surveillance camera system directly above the nurtured unmarked native garden. When I saw him on the ladder I called out to him, "Please don't put your ladder on these plants. They are endangered species." Then this Polish technician replied in broken English what only could be described as a sad yet funny commentary on not knowing what a native plant is, "Am I endangered, what do I do?"

I explained to him, "You're not endangered but these plants you are stepping on are."

He moved his ladder and was more careful but the crushed plants never produced any beans and eventually died out. Evidently, the technician, unfamiliar with identifying native plants, presumed those plants were "weeds."

One Dedicated Person Making a Difference for Recovering Local Biodiversity

Facing health issues in his mid–80s, Herb would be the first to tell you that he can't do the work alone anymore but has convinced Friendship Village to receive grants and funding from state and private sources. "I tried to get the retired people here at Friendship Village to help but they generally are not in any condition to do backbreaking work. I don't get any volunteers to help me but I do have a hired crew to fill the void."

In 2016 Herb Demmel received the Village of Schaumburg's most distinguished honor, the Volunteer of the Year award. Herb once said, "This isn't about me. It's about saving these woods for future generations. I just hope that after I'm gone, someone will take care of them."[1]

Herb and I continue to exchange native seeds throughout the growing seasons, knowing that these understory plants in the last remaining remnant of Sarah's Grove were a patchwork of a much larger ecological fabric that made up this town before settlers, farmers and suburbanites began to impose an agricultural and fashion demanding, corporate consumer culture of living out of balance, separate from the infinite ways the land, sky and water once naturally moved through the seasons.

Like an endangered species, Herb carried an exceptionally rare understanding and love as a rock solid Illinois earth steward to bring nature home to his community. He sadly passed away due to heart failure during the making of this book on March 7, 2020. Who will take his place remains to be seen.

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Giving Credit Where Credit Is Due

Having strong mixed reactions from the residents to how the landscape was radically changing, I decided to pursue recognition from outside the homeowner's association from highly reputable conservation organizations. In 2000, I applied for membership on behalf of Town Square to the Chicago Wilderness. Applying for membership as a residential association around this time to a newly formed prestigious conservation organization like the Chicago Wilderness was unprecedented. As a regional alliance of more than 100 private and public organizations at the time of applying, eventually totaling close to 300 organizations covering Illinois, Wisconsin, Michigan, and Indiana, members work together to improve, protect, study and manage the natural ecosystems of the Chicago region, contribute to the conservation of global diversity, and enrich local residents' quality of life.[1] Town Square Condominium became the first Homeowner's Association to be a member. More ecologically applied landscape homeowner's associations like Prairie Crossing in Grayslake followed shortly thereafter.[2]

In 2006 Town Square Condominium was awarded a certificate of merit in *Conservation and Native Landscaping* by the Chicago Wilderness/U.S. EPA. Other recipients of that award included such corporate giants as BP America, Inc., Dow Chemical, U.S. Steel and another homeowner's association. To know that most of the work and designing of the native gardens came from my passionate commitment to make this prototype landscape succeed was deeply gratifying when honorable recognition began to unfold.

I was a recipient to the 2008 Grassroots Conservation Leadership Award from the Audubon-Chicago Region and the Chicago Wilderness Habitat Project for my work in protecting local wetlands and educating the public on many environmental issues like lifestyle impact on the earth,

restoring natural areas through native landscaping and ecological restoration. Because of that award and my work in the protection and preservation of marshlands in Schaumburg, I was honored as one of three people recognized at the lunch ceremony during the 2008, 20th Annual Teachers of Experiential and Adventure Methodology (T.E.A.M.) Conference, at Northeastern Illinois University, Chicago, Illinois. This regional conference attracts people nationally and from around the globe, namely business leaders, environmentalists, native elders, educators, and spiritual leaders from around the world.

We also received press coverage. *The Chicago Tribune*,[3] *Chicagoland Gardening Magazine*,[4] and the *Daily Herald*,[5] wrote several articles praising the landscaping project at Town Square Condominium Association.

Truly the most gratifying professional year of my life came in 2011. A good friend of mine named Jay Shefsky, who worked as a public television producer for a local Chicago Public Broadcasting station WTTW, asked me if he could do a story about my many years creating native gardens on condominium property. I wholeheartedly welcomed the invitation and Jay came to Town Square with sharp shooting pro photographer Roy Alan and a conservation biologist/climate change ecologist/native plant habitat specialist, Dr. Abigail Derby from the Field Museum of Natural History to comment on my project. I will never forget that day which brought out the fiery best in me.

My opening words were "Lawns are designed to pollute. When you think about the impact of what you have to do to maintain a lawn, add fertilizers, add chemicals, use of water, we are inviting eco-catastrophe."

Phil Ponce is a long time, most trusted host of *Chicago Tonight*, a nightly television magazine of news and culture on WTTW, the most-watched PBS station in the country. The story aired on August 18, 2011, and was introduced by Ponce who said, "His neighbors call him the flower man but he's not planting any tulips or daffodils at his suburban condo development. He has created what must be the most extensive native gardens at a residential complex and experts say gardens like these can help slow climate change."

During her visit to Town Square Condominium that day, Dr. Derby praised the native gardens. "I wish my condominium association looked like this. It's an incredibly well thought out, well planned project they have here. And it has so many benefits to both to nature and to humans." And then she later added, "Because whether it is on your roof tops and it's a green roof, a condo association, in your backyard, forest preserves or park district areas you are providing very critical habitats that these animals can use for them to survive."

The peak summer day was sweltering with temperatures close to 100

degrees. You could tell by the video, looking at the extensive parched lawn in contrast to the flourishing richly diverse bioswale that was seldom if ever watered, that this story would definitely carry home the message of bringing back a low maintenance, healthy heritage of Illinois native plants.

WTTW would air this story several times each year for several years, boosting a wide interest in the greater community to reflect a deeper sense of ecological and conservation minded connections with the land no matter where you lived in the Chicagoland area.

Having applied for a local environmental award before, I once again

CONSERVATION AND NATIVE LANDSCAPING
AWARD
2011
Town Square Condominium Association
Residential Native Eco-Gardens
& Micro-Habitat Project
Chicago Wilderness
For exemplary use of native landscaping that creates and protects habitat for a variety of native plant and animal species and results in important environmental benefits for both people and nature.

After several years of reconstructing a landscape with a sense of natural heritage, Town Square Condominium received the coveted Conservation and Native Landscaping Award for 2011 from the Chicago Wilderness and the U.S. Environmental Protection Agency. The award was given under the category of *Residential Native Eco-Gardens and Micro Habitat Project.*

applied for a third attempt to seek the Al Larson Environmental Award for my condominium association in Schaumburg and finally received this elusive recognition by the Village in 2011.[6] This award meant the world to me coming from my hometown local government.

The highlight of all accolades came in the fall of that same year when Town Square Condominium became a distinguished recipient of the USEPA-Chicago Wilderness 2011 Conservation and Native Landscaping Award among 13 other organizations from several counties in northeastern Illinois, southeastern Wisconsin and northwestern Indiana. The category was under Residential Native Eco-Gardens and Micro Habitat Project. I received the award at the Chicago Botanic Gardens on behalf of Town Square Condominium and it was the most memorable award of my professional life. Later, we received signage for the award which states "for exemplary use of native landscaping that creates and protects habitat for a variety of native plants and animal species and results in important environmental benefits for both people and nature." I placed it on a metal post in front of the bioswale a few feet from the main road sidewalk for people to see such an honor brought home to my home town of Schaumburg.

With all this earned publicity and recognition, the Chicagoland area knew of my dedicated work with native plant landscaping/gardening. I became someone you could put a face on a very important issue for changing the face of the land as if Illinois nature matters. More importantly, as the condo association board and management continued to question the landscaping direction toward a non-conventional, unfamiliar range of ecologically applied gardens, receiving a deep pocketful of awards and recognition through the years compelled them to reluctantly cooperate with this vision. As long as I continued to push back non-native landscaping measures that would undermine a healthier ecological direction through such acknowledgment and passionate effort, they conceded. Such publicity and awards boosted my morale as a backbone to keep going despite the board's continuous resistance to accept a comprehensive native eco-garden approach to the landscape.

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Lessons in Not Becoming Disheartened

One has to have a heart of stone-cold determination to face the unpredictable onslaught of problems for keeping one's spirits going in a world surrounded by disheartening disasters, misunderstandings and personal close calls with injuries over two decades. One afternoon after school hours, while kneeling in one of the eco-tree gardens I heard what appeared to be a gun shot. When I looked behind me there was a puff of dust about ten feet away coming from the ground. I looked around to see where the shot was coming from. Cautiously pulling weeds from the bed, I heard another shot go off. When I turned around to where the projectile was coming from, I yelled at the condo complex exclaiming, "Whoever you are, if you shoot down toward me one more time I am going to call the cops." That person stopped shooting at me but apparently began shooting through a window on the 3rd floor heading out to the main road by the condo. Somebody spotted this high school kid and confiscated his high-powered BB gun. Apparently, some bored teenager coming home from school decided to toy around with property and people that late afternoon and I happened to be one of his targets.

On another occasion, a few junior high school kids were throwing small rocks at me over a berm while I was weeding on my knees. I could not see them but after one stone hit my hand I instantly began chasing them across the condo property. Like wolves in a pack and having a good head start, each of the four pesky kids split up in separate directions while approaching an adjacent school yard to confuse me as to who to catch. Realizing their smart pack strategy, I stopped, collected myself, and just watched them run away half scared and thrilled about such an adventurous, adrenaline rush escapade. In hindsight I am glad I did not catch any of them not knowing what harm I could have done

with my anger at the moment. But they never came back again to stone me as an afterschool time activity filler.

In January of 2001 after receiving a $500 grant from the North Cook County Soil and Water Conservation District to introduce prairie plants on a $5,000 management/board approved berm landscaping project, plans were made to introduce a mesic prairie on the south half of the berm where the sun shines the brightest. The auspicious anticipation of creating a 500 square foot showcase eco-garden off the main road so people could walk or drive by was dancing in my brain.

Under the supervised construction of Tecza's Rainbow Gardens, natural flagstones, recessed boulders, and weathered outcropping stones would border the berm with native plantings to be integrated in and around the stones and throughout the interior targeted area. The landscaping draft did not indicate on what side of the berm the project would be. That was a big mistake.

In early April that year, while working at my nature center day job, the construction crew was working on the berm all day. By the time I got home the project was finished and I could not believe what I shockingly viewed. They installed the rocks on the north end of the berm where the building and trees blocked out most of the light and not on the south end of the berm where the light could radiate throughout the day for the prairie plants. The mesic prairie plants introduced that spring turned out to be unsuitable and needed to be transplanted in a more open sun area. I waited a year before addressing that costly problem.

I contacted the Schaumburg Garden Club that helped me to relocate these visibly stressed plants to another appropriate site on Park District land. This assistance was much appreciated. The plants were given a new home along a trail bordering an open five-acre pond at the Ruth Macintyre Conservation Area. New England asters, prairie sunflowers, wild bergamot, grey headed coneflowers and purple coneflowers were transplanted. As a token of appreciation, these volunteer rescuers were allowed to keep one plant for every two plants planted. But the berm was barren again waiting for more woodland friendly natives to replace the sun friendly prairie plants. Eventually, woodland native perennials like trout lilies would be successfully introduced on a minimal scale with the board setting aside the bulk of the funds for introducing a colorfully dominant display of rose bushes in their place.

Pipeline Breaks!

Minding the eco-gardens over the years one cannot forget that such caring thoughtful places are vulnerable to ominous infra-structure issues. As buildings age, so does everything connected with operating the condo association. A case in point involved two bursting major water main pipelines needing emergency attention. Having no time to transplant cultivated woodland gardens with charming ornamental midsized serviceberry and pagoda dogwoods, they were removed to excavate five-foot-deep ditch lines stretching well over 80 feet for installing new pipes.

I was only able to save a handful of asters, mayapples, jack in the pulpits, celandine poppies, golden alexanders, and blue stemmed goldenrods from meeting their fate but the bulk of what I nurtured under those trees was gone. On the bright side the board allowed me to restore two sites out of three landscaped areas totally damaged. Adding two new native woodland sites by the door entranceways to both buildings brought a new refreshing appearance to people coming and going there. Each site had pagoda dogwoods with an understory of Penn sedges, lady and maiden hair ferns, harebells, and sweet black-eyed Susans.

On several occasions, due to replaced, crumbling, raised bed stone inlays in both condominium back entrances, plants needed to be transplanted and in many cases they were natives. Consequently, there were an inordinate amount of prairie coreopsis and common spiderwort in these gardens to reintroduce to other eco-garden sites on the property.

A Tree Specialist Company Fails to See the Forest Understory for the Trees

As I discussed in Chapter 6, the emerald ash borer brought total havoc to the green ash eco-gardens. Disaster occurred again when the tree care company would come to inject an effective systemic insecticide to remove the beetle from feeding under the bark. Blind to the cause on many occasions, the tree service crew would stomp on the early spring natives and suppress any successful growth from happening. Having taken photos of this disturbance, a small compensation of a couple of hundred dollars was offered but that did not come close to compensating for how much damage was done over time to these eco-gardens while treating this infestation. An entire season was wiped out not to mention a dominant opportunistic takeover of garlic mustard and creeping charlie from such ongoing disturbed impact.

Sometimes Hard Work Doesn't Pay Off

On a late spring afternoon in the midst of a severe thunderous downpour, I planted a 300-pound serviceberry tree with a humongous rooted burlap bag bulb. Having a hole five feet wide by four feet deep, the bulb was dropped off along the side of the front entrance berm about three feet from the hole. As the rains began to weigh the bag down, I sat down on the ground completely drenched from top to bottom and began pushing this small tree ever so closer to its permanent home. I could hear a voice through the heavy rains across the road in front of the Pita House, a Mediterranean neighborhood restaurant, shouting, "Dennis, what are you doing?" I yelled back, "I'm planting a tree." And she replied, "Why don't you get out of the rain? It's pouring."

That lone voice penetrating through the heavy rains was my environmental education staff coordinator Mary Rice at the Spring Valley Nature Center who was robustly laughing the whole time she was encouraging me to get out of the merciless heavy downpour.

With one lucky strenuous push of my legs the tree fell out of control into the hole, perfectly in place. The gods were kind to me that day. A couple seasons passed and the tree was doing fine until one cold wintry season when the snows were relentless, the snow plow maintenance crew began piling huge mounds of snow on the islands eventually not realizing that they were damaging the shrubs by pushing up against them and severely breaking the branches. Eventually the serviceberry I struggled to get in the ground was so mortally impaired that it was removed and replaced with another serviceberry by an outside landscaping company.

Severing the Lines of Communication for a Cause

Working with cable companies continues to be a challenge in how indifferent these communication businesses relate to the natural world. Almost every other month cable lines would not be trenched just under the ground but exposed for several feet across the eco-gardens bordering along the wall. At times I would fling the cable on the lawn just to get it off the eco-gardens. When they would continue to lay the lines over the gardens for a few weeks under the assurance they were intended to be in the ground under the lawn after a week, I would snap the cables with management permission. Sometimes the cables would be stretched out like entangled electronic spaghetti over the landscape which would make me wonder what oblivious world do these telecommunication businesses operate from.

A Resident Claims Unauthorized Rights to Eradicate an Eco-garden

After returning from a Labor Day camping weekend in Door County, Wisconsin, in the midst of a steady heavy downpour, I happen to look outside my open fourth-floor window to spot someone digging up against the raised bed wall rain garden directly below my unit. I could not believe a woman was yanking out a beautiful stand of my favorite pollinator magnet, hollow-stemmed Joe Pye Weed in full bloom, with a shovel. I yelled from my window to stop but the rains were too loud for the neighbor to hear so I frantically ran down the stairs and confronted her. She considered these tall, bending, hazy masses of purple flowers to be weeds and wanted to replace them in the rain garden with her own annuals for the season.

As hard as the work was, it was even harder to face that much of the results were in vain. And yet what kept me grounded and from plummeting into despair and resignation was my passionate drive to preserve and reconstruct a micro-ecological sense of Mother Earth in my mindful daily efforts around the condo landscape. Board members and management, the conventional landscaper, tree services, and power companies showed little priority to keeping the native gardens on the property map when handling other matters that would impact these sites. Neighbors took it upon themselves to eradicate beneficial, pollinating native plants they presumed to be weeds. To know that I was there as a lone assertive voice speaking on behalf of the natives against ominous forces of such indifference, ignorance and disregard drove me to incessantly respond to my innate biophilliac conviction to make Edward O. Wilson stand up and cheer.

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Fueling Other Minds to Go Native

Spreading the word on my multi-ranged eco-gardens would serve as a prototype land ethic for how other large-scale properties could be managed in suburban and urban locations. But I was also concerned about individual homeowners use of resources on a daily basis to deal with water conservation, healthy soils, and diversifying native plants to enrich the landscape while attracting beneficial insects. In short, I was out to change the local world as if nature was an integral part of the greater neighborhood.

The diverse ethnic and racial composition of Town Square Condo had grown significantly over the years due to a low to middle income affordability. Feeling as if I was living under a "little United Nations" with people from all over the world coming to live here, it would be fair to say that this complex was probably the most multi-cultural, racially integrated condo association in Schaumburg. With a growing inclusive consciousness in my vision to reflect the meaning of nature's diversity I set out to improve on a "biodiversity recovery" plan to broaden the application of a healthy living landscaped community.

Educating the Public

Offering programs at native landscaping conferences, regional prairie workshops, libraries, garden clubs, environmental groups, religious groups, and plant nurseries, as well as teaching classes at the Morton Arboretum & the Chicago Botanic Gardens, I have traveled throughout the Chicagoland area presenting my powerpoint presentation "Creating Native Eco-gardens in Your Community," defining *community* based on Aldo Leopold "a thing is right when it tends to preserve the integrity, stability

and beauty of the biotic community. It is wrong when it tends otherwise." Later on in his life Leopold alluded to climax prairies like "superorganisms" with native plant communities over generations interacting through the changing of the seasons in a highly complex cooperative process.[1]

The response over the years was very encouraging and at times tremendous, as I began to add on and improve on the eco-gardens at Town Square Condominium Association and offering tours to garden clubs. Additionally, I would pass out business cards and offer to install small native landscaping projects but mostly consulted with homeowners about converting lawns into richly diverse micro-habitat designed gardens. Homes that introduced native plant communities stood out in the Chicagoland neighborhoods like non-conforming, vibrant, strange, garden aberrations agitating their neighbors' conventional comfort zone as to what makes the land come to life or death, especially when taking into consideration the excessive amount of non-renewable resources expended for unecologically applied non-native landscapes.

Balancing Outreach Education with Experimental Prototypes

Considering that I worked at the nature center, while devoting time to working on the eco-gardens at my condo association, traveling around to do presentations and consultations not to mention an occasional landscaping job, it was crucial not to overextend myself away from creating a prototype to know what unfolds on the land when you take the time, energy, and intelligent care to bring a broken nature back to the community. To see the living evidence of what unfolds over time on the condo land was crucial to boost confidence with those interested in creating native eco-gardens.

Landscapes focusing on introducing prairie, woodland or wetland plants may take years if not decades before a healthy relationship between the pollinators, soil, and plants are appreciably possible. I needed to prioritize this modeled experiment knowing that over extending into other relevant endeavors could undermine this effort. The foundation of generating interest with the public could be measured on the successful outcome of creating an attractive, diverse native landscape at Town Square Condominium Association. Human nature tells us that people in general prefer to see empirical evidence before making an investment into a great unknown with their land.

With the hope of tackling such a transformative venture, I was endeavoring to be a part of a greater rippling effect to inspire other places to

apply such an earth caring stewardship. Whether on corporate property, a place of worship, around the libraries, in backyards, city parks, retirement communities, shopping malls, schools, forest preserves, park districts, parking lots, conservation easements, golf courses, nature centers, on green roofs, or over condo lawn, one is providing critical habitat to the wildlife and beneficial pollinators which have co-evolved with the native flora for thousands of years.

Eventually, the greater Chicagoland community knew of my work as I became more known in the field for native landscaping. One homeowner in Highland Park who heard about me from that PBS *Chicago Tonight* story invited me to add a few native gardens to his quaint cottage home estates once owned by Julius Rosenwald. As a famous philanthropist, early pioneer leader of Sears and Roebuck and founder of the Museum of Science and Industry during the first half of the 20th century, he donated millions of dollars to help fund African Americans in the South toward receiving an education. His charming home, surrounded by native spring ephemerals bumped up to a pristine understory maple-oak forest close to unassuming weathered limestone walls edging up on both sides of a small canyon. Off in the distance facing east through the forest was a recent magnificent Army Corp of Engineers restoration project along Lake Michigan's sandy shoreline with a state-of-the-art nature center under construction.

With such an historical flavor and natural backdrop, the landscape surrounding this lovely house was designed by one of most prominent native landscapers and designers of all times in the Chicagoland area and beyond: Jens Jensen. Chiefly responsible for designing major parks for the city of Chicago, his noted accomplishments can be seen at Garfield Park, Humbolt Park, Douglas Park, and Columbus Park as well as became a primary influence for the establishment of the Indiana Dunes. He also designed numerous homes in the north shore area of the city.

Jensen is known for his prairie style design work in the early 1900s. This would often consist of open spaces and pathways, which allowed one to stay in the shade while viewing the light. Not only did he use native plants, but also materials too. Most of his water features use slabs of limestone stacked up to recreate the natural river systems of the Midwest. Much of his prairie style designs focused around views from certain places where he would leave openings in the dense understories he was known for planting. Jensen never created paths going in straight lines to their destinations; he disliked inorganic lines that connected places like they were nodes. Much of his remarkable work combining aesthetics, history and nature can be enjoyed throughout the Midwest, particularly Wisconsin, Illinois, Indiana, and Michigan.[2]

Today his curvilinear gardens are being restored due to resurrections

of his plans. Jens Jensen was one of the most influential designers to popularize native gardens. He showed that not only could beautiful gardens have native species, but could have native species in their respective places as they would be without human integration or involvement. He taught us that beauty does not have to come from tulip farms in Holland or maple tree nurseries in Japan; it can come from the wild reaches of our backyards or state parks. He summed up his philosophy by saying: "Every plant has fitness and must be placed in its proper surroundings so as to bring out its full beauty. Therein lies the art of landscaping."[3]

When the home owner mentioned having the original blue print plans from the 1920s to Jens Jensen's design to the property, I began to melt like the holy grail had been announced. I asked him if I could see the plans and he graciously showed me a hand drawn print of the landscape overview. It looked like J.R.R. Tolkien had drawn it himself. Highly detailed, rich in abundance with native plant additions, and entirely enchanting, I was privileged to be holding a draft from one of the master native landscapers of all times.

Working with a couple of my colleagues at Spring Valley on this project we planted prairie and woodland flowers and grasses by walls designed by Jensen. It was a feeling of awe and deep respect for what was here before us and what we hoped to bring to reflect the natural heritage that Jensen lovingly embarked on.

Modern education generally maps out how to think the world works and how it thinks we ought to relate to it. The results have left our children and future ecosystems in peril, enacting the symbols and images of an extractor society taking and taking and giving very little back for the earth to heal. Native landscaping returns to an ethical ancient practice which aims to generate a more harmonious place where we want to go by not separating the laws of nature from our modern day living. Educating communities in this direction helps to bring both people and nature back in balance with the planet.

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Eyes of the Beholder

When you consider that most people cannot list more than 10 native plants in the area, and when you factor in that preserving the natural history of Illinois is seldom an important criteria for most suburban let alone urban conventional condominium associations, corporations and homeowners, the challenge is extremely tough to introduce a different horticultural map that views ecology, environmental impact, and climate change as a part of the essential aesthetic formula for an acceptable attractive landscape. Furthermore, when people spend up to 95 percent of their time indoors hooked into sealed off environments removed from the natural world, learning about the local natural world becomes more abstract than experiential and less engaging with the web of life.

Even with this great cultural wall of prejudice against nature, over the years I received several different responses most of which were positive. Many people believed what I created throughout the property was inspirational and exemplary of what could be done to change lawns into showcase native gardens to reflect a healthier living landscape. Others felt the appearance of the property was too weedy and unkempt, not knowing what those tall, drooping clusters of New England asters, prairie sunflowers, cup plants, grey headed coneflowers, Indian grass, switchgrass, Canada rye grass, or big blue stem were. Rarely would I receive any direct deep criticism on the native gardens from neighbors except from a disgruntled board ex-president or manager who would complain about the weeds and the lack of colorful flowers some of the time, not understanding that the natural cycles of a native garden have fluctuating ebbs and flows of highlighting the seasonal changes.

One neighbor raised a few monarch butterfly larvae to introduce on the milkweed. She was delighted knowing that the homeowner's association had become a member of the Monarch Way Station to monitor the migratory flight of these struggling butterflies while propagating milkweed populations around the property. I walked her over to various samples of

butterfly milkweed, swamp milkweed, and common milkweed. She said she wanted to perform a private ceremony to release them as homegrown adult butterflies on her own and I fully accepted that intimate affinity with nature's migratory gem. Needless to say, she loved the native gardens and the benefits to invite a much-needed stopover for the Monarchs.

One older gentleman resident from India speaking in a soft Gandhi–like voice would always consider my effort to be "God's work." And another woman who had lived in the inner city and knew a thing or two about living a tough life would praise the work I was doing in a biblical sense to bring beauty and nature to the condo landscape.

Perhaps my favorite insight into my work came from an older Korean neighbor, David Ha. Living at Town Square Condominium since 1981, he would occasionally spend his late afternoons and early evenings on the balcony of the fifth floor facing east looking to the sky to view planes flying in and out of O'Hare International Airport. As he explained his appreciation with broken English and with both hands over his heart for the bioswale and woodland eco-garden sites directly below his unit, "I no longer look up to the sky to see the planes come and go. I look down now and see such beauty in your gardens. Thank you so much." Both David and his wife are grateful to live in a home with a nurturing, wild, lovely, grand backyard natural landscape to view below their patio every day with a vibrant bioswale, prairie gardens, and a grove of young native trees shadowing over a predominant lawn with a quaint native micro-habitat understory.

Early each year before the growing season, I would clean up hundreds of cigarette butts and filters flung out of windows by derelict residents who did not have a clue as to what the consequences of their actions would have on the gardens let alone the environment. As a board member, condo unit home owner and chief native landscaper for the gardens, I was compelled to constantly remind people about not flipping their toxic sticks on the ground. It was also startling to discover hundreds of accumulated cigarette butts scattered throughout the property after the seasonal snows disappeared. If the residents only knew about the long-term negative effects such actions have upon a dormant and active landscape, maybe they would cease.

The filters in cigarette butts are composed of cellulose acetate, a form of non-biodegradable plastic. It takes over 15 years for a cigarette filter to break down in the environment. Pollutants contained in the butts can affect soil and water quality. Cigarette butts threaten wildlife (birds, squirrels, opossums, raccoon, rabbits, etc.). If filters block their digestive tracts, animals may become ill or even starve. Animals will also ingest hazardous compounds such as cadmium, arsenic and lead that have been absorbed by the filters. At times I would catch people flipping a butt out

the window and attempt to explain what damage they were doing to their immediate space close to their unit. Sometimes fines up to a hundred dollars were handed out to residents ignorant of their actions. Most of the time I tried to open their minds to addressing the consequences of their actions. When people disconnect from their backyard world of nature, when they spend most of their time glued to an electronic light in the box, when their eyes are stuck over a smart phone detached from the daily interplay of how nature works, flipping a cigarette butt outside of their domestic domain obliviously disrespects the space beyond their condo unit. We are what we throw away and what we are disposing to the health of the planet is directly related to what we are doing to our personal health.

Case in point: While gardening in one of the eco-gardens I saw a young man holding a beer can, flipping his cigarette filter out of a hole through his screen window from his third-floor unit and confronted him directly in the act. He said he would never do it again. His answer clearly showed an embarrassing awakening in never flipping any burning cigarette butts again, "I've been flipping them out the window screen hole all the time and didn't know what damage I could do to your gardens or critters in there." Eventually, the screen was fixed with pressure by management that the next time he tried flipping his butts out the window he could be fined $100. He never did it again.

The beauty of what nature offers is in the eyes of the beholder but if we can only take a higher road toward a purposeful balance as if nature matters, aesthetically, ecologically, and environmentally, our little critical natural places on the planet will be healthier and we will be happier for choosing that path.

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Passing the Torch and Shovel

The only certainty in life is change. That is a no brainer when facing an age that pushes you toward a compelling understanding of what to do for the rest of your life when retiring. When I decided to retire from Spring Valley, my partner Randee and I made a decision to head west to Colorado to embrace the great outdoors and continue fulfilling a dream of living the good life in the Rockies.

When I told management about my move there was obviously some consternation. Who will take up the concerns that have filled my life? From a quiet, anxious place I asked a bigger question. Who will care for our land, restore native places not only at my condo but in Chicagoland, our region, the rest of the country, the planet? Bringing the subject more down to earth, I assured both the board and management that I would in fact find the best replacement for doing the job.

Homeowners who nurture gardens with the best of intentions, thoroughly committed to bringing joy to their backyards through years of kneeling for beauty and care must know that at some point if and when they decide to move, that the next owners may rip up those gardens that they nurtured with love, and create their own landscape vision detrimental to preserving a living landscape based on ecology. This knowledge often comes with fear and sadness.

Knowing all the work and care I put into these gardens, I wanted to make sure the transition would be smooth and responsible. Training a resident who loved gardening and showed a strong inclination to take over the job was out of the question. What if that person decided to pack up and leave the condo for a job relocation or just take a leap of life somewhere else? It would pose a serious crisis for the fate of the native landscape if I were no longer physically present for guidance and future training.

I narrowed the choice of passing the torch over to two highly competent native landscapers. One was a company called Tallgrass Prairie Restoration, Inc. out of Schaumburg and the other was an individual, Jeff Weiss, who had extensive experience as a native seed collector with the Sierra Club and oversees the native plant communities at the Buffalo Grove Park District. I walked project ecologist Mark Micek from Tallgrass Prairie Restoration, Inc. and Jeff Weiss on separate visits around the targeted sites and described in detail the rich multi-seasonal diversity of native plants established around both condo buildings and in the open woodland sites. My recommendation, approved by the board, was to go with Tallgrass because if something were to happen to Jeff Weiss the project could be totally jeopardized leaving the association in a precarious situation for the landscaping season and beyond.

I told Jeff that the association would be passing the torch over to Tallgrass in early July and I would perform my duties until then. As a reputable company which worked with the Village of Schaumburg and the Schaumburg Park District, they had been assisting me with the prescribed burns for two years and were scheduled to continue using this ecologically applied tool for maintaining a healthy, relatively weed free landscape. I was completely satisfied with this decision although not everyone seemed to be on board. Management had been complaining about the two front island entranceways being weedy and unkempt. When Mark attended the board meeting to take questions about issues and concerns of turning it over to Tallgrass, he assured them that these plants, like the New England asters, could be cut in half and they would still flower without a problem. He gave them the fullest assurance that weedy native gardens could be cut back and still manage to look attractive. He also informed the board that I had oriented him over the targeted sites throughout the past two seasons so he would know how to manage each area appropriately.

Mark knew these native plants like the back of his hands. I felt his comments were reassuring, but I sensed some grumbling by a couple of board members, both former condo resident owners who moved out. Management became very steadfast on addressing the appearance of the entranceways too. One of the disgruntled board members had been adamantly opposed to any native gardens from day one, preferring more conventional arrangements of petunias, tulips, mums, daffodils, and begonias. As a first generation American she persistently refused to learn about any native plants, having a strong pull toward an appreciation of the flowery beauty from her native Poland. I felt a little nervous in letting go for this new change in my life, not knowing the fate of the landscape. But I had made my move; now I would have to live with it.

The likelihood of both island entrances facing a complete change in

direction seemed imminent but the rest of the sites appeared to be safe and resolved to keeping the natives managed. When Tallgrass Restoration, Inc., was officially hired to finish out the year by the board, I invited Mark to come by and take a picture with the conventional landscaping owner Andy Shelton of Andy's Lawn Maintenance who had been hired for years to maintain the landscape, including winter plowing. I had worked with Andy for several years and found the company to be very responsive and accommodating to addressing the native plant garden issues and native tree orders for them to plant. I walked with both Andy and Mark around the grounds just to make sure they would be in sync with the needs of the land. Leaving no stone unturned, I wanted to acknowledge both efforts to keep a balance of appreciation for working together to understand the parameters of each landscape approach and to not encroach into each other's assigned area.

Reality Check with Years of Transforming Spaces into Eco-Friendly Places

In May of 2016 I decided to offer a final farewell PowerPoint presentation about the native gardens to the residents at Town Square Condominium Association. The announcement was posted ten days ahead of time in the elevators, the entrance lobbies and in the laundry rooms of both condo buildings. Over the many seasons I found complete love and purpose with my work giving back to Mother Earth a healthy native pride with nature and I was highly anticipating a turnout to share my accomplished story with this landscape transformation as a gift back to the people who live there. Management agreed to provide goodies and beverages for this special program to entice a receptive crowd.

The outcome turned out to be disheartening. No one showed up except the manager Elizabeth Czarny and my good neighbor Fran Moy who just happened to be there when she was doing her mundane laundry chores. I decided to scrap the presentation and just chat with both of them about life in general and the exciting challenges ahead moving to the Rockies as a genuine Midwestern flatlander.

I cannot force people to come and see the work I did or hear my inspirational story. Maybe this world I was trying to regenerate over the years wasn't made for the residents' because such a personal nurturing land ethic with nature seemed to be on a parallel universe with them in a most fundamental way. Since beginning the project, transiency escalated to over 60 percent renters from 65 percent ownership over the last 15 years. Times are sadly different and people are moving in and out of

Town Square Condo more frequently than ever. But I am awakened deeply by my experience bringing nature partially back from a bleak, chemically dependent, water and fossil fuel demanding, constantly manicured lawn, embracing all the nearly 20 richly rewarding years of kneeling for natives.

Going Back to Where the Spark Ignited

Twenty-nine years after I unsuccessfully attempted to present my case to Bar Harbor Condo Association in 1988, I returned to the high

Photograph taken almost 29 years after that adamant response from the president of Bar Harbor Condominium Association in 1989 addressing the issue that introducing a native wet prairie–wetland landscape was simply too late to restore and out of the question. And he is right. If we choose to do nothing, nothing will change, including the landscape.

maintenance pond with no bordered wetland vegetation, a landscape blanketed in pure chemically treated lawn, a few token river birches and scattered weeping willows. Essentially a world removed from the ecological fabric of life. I still remember the words on the phone from the president of that association saying, "What's done is done, you can't turn the clock back." Well, I tried to make it happen in my condo association and had remarkable results, but doubts about the future outcome of these eco-gardens loomed.

In the words of cosmic thinker Brian Swimme, "humans can house the tremendous beauty of Earth, of life, of the universe. We can value it, feel its grandeur."[1] I believe I did just that, if not for others then for the personally driven ecological sanity of living in this sacred biosphere.

Thank you dearly to all the board of directors and management officers as well as the residents for nearly two decades who supported me in this journey to soft revolutionize the land.

I must let go now, hands and knees.

Epilogue

Catchers in the Rye

> *You must be able to do three things: to love what is mortal; to hold it against your bones knowing your own life depends on it; and, when the time comes to let it go, to let it go.*—Mary Oliver, *In Blackwater Woods*[1]

Retiring in the Colorado Rockies has brought pure joy to my daily encounters with the great outdoors and nature. I left Illinois believing that the landscape I passionately tackled for close to 20 years through an ecological understanding of bringing nature back would be for the most part in good trusting hands with a reputable, ecologically applied landscaping company, Tallgrass Restoration, Inc., for seasons to come.

I was wrong.

While home in Chicago to visit family and friends in the late spring of 2017, I called Mark Micek, the ecologist field manager at Tallgrass to see how things were going with the beginning of the year. He called me back and said he had not received any word for burning there nor had he received an annual contract overseeing the native sites on the property for the up and coming season. When I contacted management at Town Square I was told that the company would not be rehired for the year and that a major change of landscape was in the making.

Since I happened to be in the area visiting Spring Valley Nature Center, I drove up the road in anxious trepidation of checking out what was unfolding on this land where I had hoped to leave a legacy of beauty and ecology. As I drove into the entranceway at the 220 S. Roselle Road island, I saw a total erasing of all the native plants with just the river birch and the nannyberrys standing alone in a torn-up setting. Gone were the shooting stars, blazing stars, woodland phloxes, purple coneflowers, black-eyed Susans, Junegrasses, little blue stems, switchgrass, smooth blue asters, New

England asters, wild columbine, butterfly milkweed, grey headed coneflower and on and on.

On the back side of the island everything was removed including the snowberries, wild ginger, wild columbine, harebells, Junegrass, little blue stem, purple coneflower, pagoda dogwood, and the precious Illinois endangered northern white cedars. My mind, body and spirit felt jolted with such shock that I began to take photos of this area to wake me up to this complete consternation.

On the island of the 300 S. Roselle Road building the situation was strikingly similar. On the front side gone were the prairie dropseed, prairie phlox, prairie blazing star, butterfly milkweed, New England aster, smooth blue aster, hairy aster, switchgrass, Indian grass, black-eyed Susan, purple coneflower, pale purple coneflower, spiderwort, and on and on. The area was completely stripped of any plants at all except for the shrubs and tall white pines on the hill.

On the back side of the island facing the building, the snowberry shrubs, wild ginger, wild columbine, purple coneflower, and common milkweed were gone, but two Illinois rare northern white cedars and a pagoda dogwood still remained. It appeared that on this island they had not completely finished prepping the "new and improved" landscape. And what was that change of face to become but ornamental annuals and biennials like begonias and petunias which are commonly considered attractive but disconnected to the rest of how nature once co-evolved there. Pollinators don't like them, the soil cannot gain from these high maintenance annuals, they are not climate changing fixers, and they require constant watering to maintain their shallow beauty.

Why had I not been notified about this drastic change? I could have received a call, text or e-mail by the board president or management while living in Colorado to be given time to contact and recruit wildflower rescue groups and individuals to relocate these natives as well as their nurturing soil accompaniment to proper homes where they would be respected and cared for. Instead, I discovered accidently through the back door that the board had decided to strip away these islands to return to another suburban time when ecology and native plants were barely a part of the language for landscaping.

Granted the board had discussed in the early summer of 2016 that the islands looked unkempt and weedy but that could have been easily remedied by cutting back the plants like the New England asters, dwarfing their size but still allowing the flowers to bloom. Tallgrass Restoration, Inc., finished up the back half of the season knowing that this problem could be managed and corrected. If there were any issues related to how the landscape appeared why didn't the board contact Tallgrass to take

care of those problems? According to Tallgrass field supervisor Mark Micek he was never contacted about any measures needing attention during that season.

It soon became apparent that when I handed over my job to Tallgrass Restoration, Inc., the board and management, had without my knowledge already made up their minds to scrap the native landscaping and go with something more conventionally comforting to the suburban residents' eyes.

When I returned to Colorado, I contacted the management to follow up on what was to transpire for the rest of the native gardens and micro habitats on the property. Property manager Elizabeth Czarny said the board decided to go in a "different direction" with the landscape and that all the native plants were going to be removed. My heart was beating like a hummingbird and I knew immediately that those nurtured plants (which amounted to well over a hundred thousand dollars not to mention the ecological benefits and nurtured soil about to be wasted) needed to be rescued. I asked the manager if people could come there to relocate these plants and the response was that every native plant could be removed except on the prairie berm off Roselle Road with the sign that boldly read *Native Prairie Wildflower Sanctuary.*

That site was probably the least successful in terms of establishing a healthy diverse mesic prairie community and requires tremendous weeding out of invasive non-natives like bindweed, quack grass, and a native prairie sunflower that spread through the entire berm as an aggressive unchecked resident. Perhaps the non-native red and yellow tulips dotting the hill accustomed to the residents' personal liking during the early spring ironically saved the future of this prairie. Without any periodic burns to remove the onslaught of future weed encroachment, mowing the site down in the fall is a must. Knowing the future of the association's landscaping direction, a new sign seems more appropriately fitting on the hill: *Here Once Was a Managed Native Prairie Wildflower Sanctuary.*

When I began adding native plants to Town Square back in the spring of 1996 the Wild Ones provided the opportunity to find rescuing areas subject to development. Now in 2017 the full circle had arrived. I contacted Bob Porter and Stephanie Walquist of the West Cook Chapter of the Wild Ones in Chicago and the response was incredibly swift and overwhelming.

Just before sending out this alert one of the candidates for taking over Town Square's native sites was contacted. As a native seed collector for the Sierra Club Chapter who oversees native plant communities through the Buffalo Grove Park District, Jeff Weiss was someone who could reliably transport huge chunks of native plant material to a restorative spot.

When he was told, he jumped on this rescue mission immediately loading up pots of dug out woodland, wetland, and prairie transplants to fill his van. He told me there were hundreds more to be saved after he left with a full load. On a short 24-hour getaway trip to Garden of the Gods while trying to enjoy the time there I could not escape from worrying about the fate of these plants. My soul partner Randee and I agreed not to pick up the phone for whatever reason, to experience the fullness of our R&R time there. I tried to hold back but my passionate lifework seemed to be too much for me to resist responding to this alarming moment. Looking at one of the most beautiful red rock outcroppings on a still sunset evening there I received a text from Jeff that drove me into the abyss. In his words on June 19, 2017:

Dennis, I'm sorry to report this to you. I went out to Town Square this afternoon, and here is what I saw…

- *the berms (in front of 200 and next to Roselle Road) were already torn out and replanted with grass and crappy-looking begonias.*
- *plants had been dug up all along the edges of the swale—I estimate a thousand of them. The holes looked like they were dug with a machine—very clean and consistent-sized holes. So at least someone got plants! Perhaps they also harvested plants from the berms.*
- *very few seeds—three species of sedges were all that were present (and ripe)*

We will rescue plants in the swale tomorrow, but there is honestly only a few species that we can use that are transplant-able. There are some of the most gorgeous compass plants and prairie dock I have ever seen, but their tap roots are too deep and they will quickly die if we try to dig them. We will gratefully use Iris, queen-of-the-prairie, prairie cordgrass, sedges, swamp milkweed and a few others. There will be lots left over for others.

I was not supposed to look at my smart phone for messages on a romantic getaway trip, however, knowing that all of my effort and passionate juices to make a landscape earth friendly and inspirational could be totally lost completely deflated all potential good times of living in the lovely moment with Randee and the gorgeous dusk glaring red rock outcroppings. The rapidly disappearing "Garden of the Gods" in Schaumburg was calling me back. Action to rescue these plants was still in motion no matter what little remained and no matter how far I was from this rampant, ecologically regressive development. The very next day after recovering from a huge jolt of loss, Jeff sends me an unbelievable update.

Dennis, here is an update … we rescued three truckloads and a van load of plant today. One of the guys figured out that those were not plant removals but rather stones that created the neat impressions in the soil. All of the stones were removed from the edges of the swale and native plant beds. The plants were intact.

We found and moved more species from the swale than I mentioned yesterday—

cardinal flower, ironweed, coreopsis, sundrops, water horehound—add them to the short list from last night.

We also moved two beds of flowers from under trees and rescued Solomon's seals (true and false), geraniums, sweet Cicely, May apples, meadow rue, asters and other good things. We did not touch anything near the buildings—the soils were crisscrossed with tv cables and we did not want to cut one.

Thank you Dennis for bringing this to our attention. Have you located anyone else interested in these plants? There are hundreds left.

Best regards.
Jeff

Not only was his update uplifting but the West Cook Wild Ones sent out a bulletin alert on Facebook and I received close to 80 calls in two days telling me they wanted to come to Town Square to rescue the gardens. I tried to answer every call personally to encourage them to come and gave them a note of gratitude for keeping these plants alive in a new welcomed home and for bringing some restorative hope to these natives. The calls came from all over the Chicagoland area, Rockford, DeKalb, Iowa, Wisconsin, and even in Colorado where I now reside. Calls from garden clubs, Illinois Department of Transportation, applied ecological services, conservation groups, homeowners, schools, nature centers, churches, park districts and even homeowner's associations.

Much of that response came as a result of the video about my native landscaping that aired annually on PBS Channel 11 on *Chicago Tonight* as well as all of the eco-garden talks that I presented to scores of garden clubs, conservatories, libraries, conservation groups, Chicago Botanic Gardens and the Morton Arboretum over 15 years. Roughly a hundred people showed up with permission from Town Square's condo board and management within 11 days to shovel out healthy chunks of nurtured native plants throughout the property.

Opposite top: **The Village of Schaumburg, Friendship Village, Schaumburg Park District and Town Square Condominium (until I left) all adopted the Chicago Biodiversity Recovery Plan in an effort to maintain, restore and preserve the ecological integrity of open space in the town. Seen here is a $400,000 community block creek restoration grant back in 2004 introducing native riparian vegetation close to the municipal center.**
Bottom: **Spring Valley Nature Center is an ecological experiment for cultivating a sense of natural heritage in a commercially driven suburb that draws people together to appreciate the ongoing lessons of land stewardship, historical preservation, community volunteerism, and environmental education. When one experiences a carefully managed vibrant prairie rise up from a once degraded farm landscape over decades, there evolves a growing hope that restores a closer balance for our children's sake and the sake of all the other species around us who depend on how we live in this nature-detached, demanding modern world.**

It was nothing short of a miracle. What could have been a long, upsetting nightmare of grief and anger turned into a glorious rally for the cause. In retrospect, I am forever grateful that Town Square management and the board allowed me to create an exemplary prototype native plant community on residential lawn for nearly a couple of decades. If anything, I maintained a sense of stewardship while living there and I am at peace with myself for that reason alone. Never owning an inch of that soil, I took care of the earth as if the land was a close kin to me. Deep in my heart and mind I knew the possibility the board would eventually remove this healthy vision with the earth when I was no longer there whether dead or still alive. That is why over several years I worked with Friendship Village, the Village of Schaumburg, and Spring Valley Nature Center to collect these native seeds from Town Square Condominium so they could be spread throughout the town. All these organizations have adopted a Chicago Biodiversity Recovery Plan.[2]

Indeed, not all my effort was thrown to the landfill. Like a Johnny Prairie Seed gone wild I have broadcasted from the home grown seed bank source of Town Square Condominium millions of wet and mesic prairie seeds over many years throughout restored open native vegetative retention ponds and open managed natural fields within the Schaumburg Park District and the Village of Schaumburg which have produced wonderful varieties of asters, coneflowers, wild bergamot, prairie blazingstars, cup plant, sweet black-eyed Susans, blue flag irises, thimbleweed, blue stemmed goldenrod, Indian grass, sweet cicely, prairie sundrops, prairie sunflowers, sneezeweed, hollow Joe Pye weed, Ironweed, tall meadow rue, blue vervain, swamp milkweed, butterfly milkweed, golden alexanders, Riddell's goldenrod, elm leaved goldenrod, foxglove beardtongue, prairie coreopsis, big blue stem, Queen of the Prairie, switchgrass, Canada wild rye, yellow creamy gentians, bottled gentians, Virginia wild rye, great blue lobelia, and several types of sedges.

I realize the homeowner's association management and board president did not inform me as to the removal of these native landscapes in the beginning, after hiring a company to tear up the two front islands but they promptly acknowledged my pressing concern once addressed, allowing scores of native rescuers to come. For that I am forever grateful to Town Square. Each person who rescued a chunk of that soil/plant community in my humble opinion is carrying a human seed of consciousness that conveys a strong desire to keep a treasured part of our natural heritage close to home.

Illinois deserves to have a flora and fauna that represents deeper affinities to nature, a place where we can look out our back door and experience an amazing, evolving, regenerative biodiversity linking us up to

a greater mystery which can only be described as reconcilable bliss. There are those precious pollinator friendly gardeners and landscapers out there kneeling for natives who understand this eco endearing endeavor. A work colleague at Spring Valley Nature Center, Matt Streitmatter, raved about the transplanted rescue mission three years later, writing, "Our woodland and rain gardens around our home are finally popping. We're close to 100 different native species, mostly from the transplants you gave me. Thanks again."

Perhaps one of the wildflower rescuers named Maggie Soliz summed it up best: "Thank you for your vision and hard work over the years. One day what has happened in Schaumburg will not be tolerated."

But I need to remember that the grief from eradicating so much native flora from the condo landscape is shared by the residents as well. They too will never walk by a tallgrass prairie where purple coneflowers and sunflowers dance with goldfinches. The children have lost the chance to sing with the neighborly butterflies and hummingbirds visiting these eco-gardens where they live. The joy of such a promising natural landscape falls to the wayside replaced once again by an extensive lawn as if turned back in time to comfort the minds of the powers that be where ecology and nature are secondary to conventional residential landscaping.

Meanwhile, the amount of carbon dioxide in Earth's atmosphere rose at a record pace in 2017 to the highest level in at least 800,000 years, says the World Meteorological Organization and yet the Town Square Condominium Board decided to ignore any effort to change the landscape for keeping up with the future environmental costs and ecological consequences.[3] In 2017 scientists consisting of 15 Nobel laureates moved the hands of the symbolic "Doomsday Clock" closer to midnight more than any other year amid increasing worries over nuclear weapons and climate change.[4] As we become the first generation to know we are irreparably reaching a tipping point, destroying our future, facing a Sixth great mass extinction of an unprecedented shock wave to hit humanity and the rest of the planet, we are compelled to come to terms as the last one to do anything about it.

Now the only native remnants of this grand little living landscape are the trees and shrubs. All is gone except for the prairie berm with that captivating sign which perhaps saved this site from removal: *Native Prairie Wildflower Sanctuary*. My dearest conservation advocate friend Ruth Macintyre still has her transplanted compass plants deeply rooted in the omega native garden. Her memory is still intact in those prairie stalwarts. Cars and pedestrians can still see the fading sign along Roselle Road but only a few will remember what the rest of this amazing wondrous land

Based on modern society's reinforced influences to live removed from the natural world, are we facing the dusk of a vanishing landscape once an amazing part of Illinois's natural history or are we ecologically awakening to a new dawn of bringing back a living network of native plant communities to our local piece of the planet?

possessed over a nurturing stretch of almost two decades. Tree rings of time pass as the scattered introduced bur, swamp white and red oaks, basswoods, red maples, tulip trees, and white pines stand strong minus a once vibrant woodland understory to accompany their journey.

Like a pollinator hopping from one evolutionary linked flower to

another, each rescuer carries a culturally potent pollinating connection to treating natural systems close to home not as a threat to the landscape but an embracing source of finding some peace with the earth through nurturing care and understanding with their indigenous place on the planet. They kneel for natives and I am forever grateful.

As of 2019 the Village of Buffalo Grove owns a woodland area called Farrington which was completely invaded by buckthorn at the time of the Town Square rescue. Overseen by Jeff Weiss, rescued plants were stored in pots under a giant spruce tree near village hall all summer of 2017 while the buckthorn was managed and were finally planted in late fall. Nearly all survived and have started to spread. Those plants provided the only native ground cover while seedlings were beginning to grow. Now, the entire area is covered with plants that can compete with buckthorn. It is still easy to identify the native plants that came from Town Square.

Only time will tell if all these rescued plants found a new home, but encouraging stories like that tell me the soil and native plants I nurtured do have a new place where life can begin again in the trusted hands, hearts, and minds of caring eco-gardeners.

We in this pursuit of preserving an ancient living landscape no matter how small or large know there are bigger issues at hand. The ecological crisis, encompassing interrelated challenges like climate change, biodiversity loss, vanishing topsoil, over consumption, global warming, overpopulation, unchecked corporate pollution with massive unrestored habitat destruction, and the widespread use of pesticides, threatens the futures of entire species, ecosystems, and human civilization. The crisis has roots in the way that people, particularly those living in industrialized, affluent societies, perceive their relationship to other humans, living beings, and the earth itself.

Noted social activist and environmental journalist Naomi Klein once asked the great prophet farmer poet Wendell Berry what she and others could do as rootless post-modern citizens in search of a community and he replied "Stop somewhere and begin the thousand year long process of knowing that place."[5]

We are, for good or ill, woven into the fabric of the place we live, changing it simply by being here. We are a part of the character as well as the landscape of America, and as a result mutually defining each other. Part of what makes this country what it is for us is the limitless possibilities it embodies, its capacity to support the most grandiose of dreams and realized hopes. Yet our dreams are facing fruitless ends in the future unless a broader inclusion for nature is factored into the meaning of the "good life."

Therefore, a shift towards more ecological worldviews and the

cultivation of an ecological wisdom that enables persons to perceive reality meaningfully in a personal kinship way and discern ecologically appropriate actions for the common good can play a key role in addressing the crisis. Such a consciousness is greatly needed now more than ever in our human history to heal the web of life while we heal ourselves.

Appendix A

Town Square Condominium Native Plant Introduction List (1996–2015)

Native Plant Designed Habitat (NPDH):
(w) woodland (p) prairie (wt) wetland (seasonal)

Plant Type	***NPDH***	***Flowering Cycle***
Actinomeris alternifolia / Wingstem	w	late July–late August
Adiantum pedatum / Maidenhair Fern	w	early May–late June
Aguilegia canadensis / Wild Columbine	w, p	mid May–late June
Alisma subcordatum / Water Plantain	wt	late April–late July
Allium cernuum / Nodding Wild Onion	w, p	late June–September
Amorpha canescens / Leadplant	p	late May–late June
Andropogon garardii / Big Bluestem	p	late July–late August
Andropogon scoparius / Little Bluestem	p	late May–late June
Anemone canadensis / Meadow Anemone	p	late April–early June
Anemone cylindrica / Thimbleweed	p	June–July
Anemone quinquefolia / Wood Anemone	w	May–June
Arisaema dracontium / Green Dragon	w	May–June
Arisaema triphyllum / Jack in the Pulpit	w	late April–May
Asarum canadense / Wild Ginger	w	mid May–June
Asclepias incarnata / Swamp Milkweed	wt	June–early September
Asclepias purpurascens / Purple Milkweed	p	June–July
Asclepias syriaca / Common Milkweed	p	late May–June
Asclepias tuberosa / Butterfly Milkweed	p	July–August
Aster azureus / Sky Blue Aster	p	September–early October
Aster dumosus / Bushy Aster	p	July–August
Aster ericoides / Heath Aster	w, p	late May–September
Aster laevis / Smooth Blue Aster	p	August–September
Aster novae-angliae / New England Aster	w, p, wt	August–mid October

Plant Type	*NPDH*	*Flowering Cycle*
Aster sagitifolium / Arrow Leaved or Drummond's Aster	w	late August–September
Aster sericeus / Silky Aster	w, p	August–September
Aster umbellatus / Flat Top Aster	wt, w	July–August
Astragalus canadensis / Canadian Milk Vetch	p	August
Athyrium filix femina / Lady Fern	w	July
Aureoloria grandiflora / Lance Leaved Gerardia	w	August–early September
Baptisia australis / Blue False Indigo	p	late May–early July
Baptisia lacteal / White Wild Indigo	p	May–July
Blephilia hirsataw / Hairy Wood Mint	w, wt	June–July
Bouteloua curtipendula / Side Oats Grama	p	July–August
Bromus kalmii / Prairie Brome	p	June–July
Bromus pubescens / Woodland Brome	w	late July–August
Bruchloe dactyloides / Buffalo Grass	p	mid June–July
Cacalia suaveolens / Sweet Scented Indian Plantain	wt	late July–early September
Caenothus americanus / New Jersey Tea	p	June–early July
Calamagrostis canadensis / Blue Joint Grass	wt	July–early August
Caltha palustris / Marsh Marigold	wt	May–June
Campanula rotundifolia / Harebell	p	June–July
Carex albicans / Blunt-scaled Oak Sedge	p	June–early July
Carex aquatillis / Long Bracted Tussock Sedge	wt	mid May–mid June
Carex bicknellii / Copper Shouldered Oval Sedge	p	May–mid June
Carex blanda / Common Wood Sedge	w	May
Carex buxbaumii / Dark Scaled Sedge	wt	May
Carex cephaloidea / Rough Clustered Sedge	p	May–early June
Carex Comosa / Bristly Sedge	wt	mid May–June
Carex crawei / Early Fen Sedge	wt	May–early June
Carex cristatella / Crested Oval Sedge	wt	May–early June
Carex frankii / Bristly Cattail Sedge	wt	mid May–mid June
Carex granularis / Pale Sedge	wt	mid May–mid June
Carex lurida / Bottlebrush Sedge	wt	mid May–June
Carex pensylvanica / Pennsylvania Sedge	w	mid May–June
Carex scoparia / Pointed Broom Sedge	wt	mid May–June
Carex sprengelii / Long-Beaked Sedge	wt	late April–May

Plant Type	*NPDH*	*Flowering Cycle*
Carex stipata / Awl-fruited Fox Sedge	wt	May–early June
Carex stricta / Tussock Sedge	wt	May–early June
Carex tetanica / Common Stiff Sedge	wt	mid May–early June
Carex vulpinoidea / Brown Fox Sedge	wt	mid May–early June
Cassia herbecarpa / Wild Senna	p	mid June–July
Cassia nictitans / Wild Sensitive Plant	p	late July–September
Caulophyllum thalictroides / Blue Cohosh	w	mid May–June
Chelone glabra / Turtlehead	wt	August–September
Cimicifuga racemosa / Black Cohosh	w	late June–August
Claytonia virginica / Spring Beauty	w	mid March–early May
Coreopis lanceolata / Lance-leaved Coreopsis	p	late May–August
Coreopsis palmata / Prairie Coreopsis	p	July–August
Coreopsis tripteris / Tall Coreopsis	p	August–early September
Desmanthus illinoensis / Illinois Bundleflower (Sensitive)	w	July–August
Desmodium canadense / Showy Tick Trefoil	p	July–early September
Dodecatheon meadia / Shooting Star	w, p	May–June
Echinacea pallida / Pale Purple Coneflower	p	July–August
Echinacea purpurea / Purple Coneflower	w, p	late July–September
Eleocharis palustris / Spike Rush	wt	June
Elymus canadensis / Canada Wild Rye	w, p	July–August
Elymus virginicus / Virginia Wild Rye	wt	June–early July
Erigeron annuus / Daisy Fleabane	w, p	late June–September
Eryngium yuccifolium / Rattlesnake Master	p	late June–August
Erythronium albidum / White Trout Lily	w	April–May
Eupatorium dubium / Joe Pye Weed	w	August–mid September
Eupatorium fistulosum / Hollow Joe Pye Weed	w	August–mid September
Eupatorium maculatum / Spotted Joe Pye Weed	wt	August–mid September
Eupatorium perfoliatum / Common Boneset	p	August–September
Filipendula rubra / Queen of the Prairie	wt	June–July
Fragaria virginiana / Wild Strawberry	p	May–June
Galium boreale / Northern Bedstraw	p	June–July
Gaura biennis / Biennial Gaura	w	August–mid September
Gentiana andrewsii / Bottled Gentian	p	August–mid September

Plant Type	*NPDH*	*Flowering Cycle*
Gentiana flavida / Yellowish Gentian	w, p, wt	late July–mid September
Geranium maculatum / Wild Geranium	w	mid June–July
Geranium robertianum / Herb Roberts	w	mid May–September
Geum triflorum / Prairie Smoke	p	June–early July
Glyceria striata / Fowl Manna Grass	wt	mid May–mid June
Helenium autumnale / Sneezeweed	p, wt	late August–September
Helianthus divaricatus / Woodland Sunflower	w	July–September
Helianthus grosseserratus / Saw-toothed Sunflower	wt	August–September
Helianthus laetiflorus / Showy Sunflower	w, p	August–September
Helianthus occidentalis / Western Sunflower	p	August–September
Helianthus petiolaris / Prairie Sunflower	p	late June–August
Heliopsis helianthoides / False Sunflower	w, p	July–mid September
Hepatica acutiloba / Sharp-lobed Hepatica	w	late May–June
Heracleum maximum / Cow Parsnip	wt	June–July
Hieracium canadense / Canada Hawkweed	p	July
Hierochloe odorata / Sweet Grass	wt	May–June
Huechera richardsonii / Alumroot	w, p	June–early July
Hydrophyllum virginianum / Virginia Water Leaf	w	May–June
Hypericum kalmianum / Kalm's St. John's Wort	wt, p	July–mid August
Hystrix patula / Bottlebrush Grass	w	July–early August
Iris virginica shrevei / Blue Flag Iris	wt	May–early June
Juncus effusus / Common Rush	wt	July–mid August
Juncus torreyi / Torrey's Rush	wt	July–early August
Koeleria cristata / June Grass	p	June–early July
Lactuca biennis / Tall Blue Lettuce	w	August–early September
Liatris aspera / Rough Blazingstar	p	August–early September
Liatris pycnostachya / Prairie Blazingstar	p	July–August
Liatris spicata / Marsh Blazingstar	wt	July–August
Lilium michiganense / Michigan Lily	p	July–early August
Lithospermum latifolium / Broad-leaved Puccoon / (American Gromwell)	wt, p	late April–early June
Lobelia cardinalis / Cardinal Flower	wt	late July–August
Lobelia siphilitica / Great Lobelia	wt	August–mid September
Lupinus perennis / Wild Lupine	p	late May–early July

Plant Type	*NPDH*	*Flowering Cycle*
Lycopus americanus / Common Water Horehound	wt	August–early September
Mainthemum canadense / Wild Lily of the Valley	w	late April–early June
Mertensia virginica / Virginia Blue Bells	w	late March–early June
Mimulus ringens / Monkey Flower	w	June–early September
Monarda fistulosa / Wild Bergamot	w, p	late June–early August
Oenothera biennis / Evening Primrose	p	mid June–early August
Oenothera pilosella / Prairie Sundrops	p, wt	late June–early August
Osmorhiza claytoni / Sweet Cicely	w	June–July
Oxalis stricta / Yellow Wood Sorrel	w	May–June
Oxalis violacea / Violet Wood Sorrel	w	April–July
Panicum virgatum / Switch Grass	p	July–August
Parthenium integrifolium / Wild Quinine	p	July–August
Parthenocissus quinquefolia / Virginia Creeper	w	July–August
Penstemon cobaea / Showy Beardtongue	p	May–mid June
Penstemon digitalis / Foxglove Beard Tongue	p	late June–August
Petalostemum purpureum / Purple Prairie Clover	p	July–mid August
Phlox divaricata / Blue Phlox	w	mid April–mid May
Phlox paniculata / Garden Phlox	p	May–early July
Phlox pilosa / Downy Phlox	p	May–June
Physostegia virginiana / False Dragonhead	p, wt	August–mid September
Podophyllum peltatum / Mayapple	w	April–June
Polemonium reptans / Jacob's Ladder	w	June–July
Polygonatum biflorum / Solomon's Seal	w	April–May
Potentilla arguta / Prairie Cinquefoil	p	mid June–August
Potentilla simplex / Common Cinquefoil	p	mid April–June
Pteretis nodulosa / Ostrich Fern	w	June–August
Pycnanthemum virginianum / Mountain Mint	w, p, wt	July–August
Ratitibida pinnata / Gray-headed Coneflower	w, p	July–August
Rubus odaratus / Purple Flowering Raspberry	w	June–July
Rudbeckia hirta / Black-eyed Susan	w, p	July–mid September
Rudbeckia subtmentosa / Sweet Black-eyed Susan	p	August–September

Plant Type	*NPDH*	*Flowering Cycle*
Rudbeckia triloba / Thin-leaved Coneflower	w	July–mid September
Ruellia humilis / Wild Petunia	p	late June–August
Sagittaria latifolia / Common Arrowhead	wt	late May–early August
Sanguinaria canadensis / Bloodroot	w	April–May
Scirpus atrovirens / Dark Green Rush	wt	late June–early August
Scirpus cyperinus / Wool Grass	wt	late June–early September
Silene regia / Royal Catchfly	w	June–August
Silphium integrifolium / Rosin Weed	p	August–mid September
Silphium lacinatum / Compass Plant	p	late July–early September
Silphium perfoliatum / Cup Plant	wt	July–mid August
Silphium terebinthinaceum / Prairie Dock	p, wt	August–September
Sisyrinchium angustifolium / Blue-eyed Grass	p	June–July
Smilacina racemosa / False Solomon's Seal	w	May–June
Smilacina stellata / Starry Solomon Seal	w	mid June–July
Solidago altissima / Tall Goldenrod	w, p	August–early October
Solidago caesia / Blue-stemmed Goldenrod	w	August–early October
Solidago flexicaulis / Zigzag Goldenrod	p	mid August–early October
Solidago lancifolia / Lance-leaved Goldenrod	w	late August–early October
Solidago nemerosa / Old Field Goldenrod	p	mid August–early October
Solidago riddellii / Riddell's Goldenrod	p	mid August–September
Solidago rigida / Stiff Goldenrod	p	August–early October
Solidago speciosa / Showy Goldenrod	p	August–October
Solidago ulmifolia / Elm-leaved Goldenrod	w	August–October
Sorghastrum nutans / Indian Grass	p	August–September
Sporobulus heterolepsis / Prairie Dropseed	p	August–early September
Stylophorum diphyllum / Celandine Poppy	w	April–July
Thalictrurm dasycarpum / Smooth Meadow Rue (white)	p	May–June
Thalictrum pubescens / Tall Meadow Rue	w, wt	late June–early August
Tradescantia ohiensis / Spiderwort	p	June–July
Trillium grandiflorum / White Trillium	w	April–May
Trillium sessile / Sessile Trillium	w	April–May
Trillium undulatum / Painted Trillium	w	April–May

Plant Type	*NPDH*	*Flowering Cycle*
Triosteum illinoense / Illinois Horse Gentian	w	mid May–June
Verbena hastata / Blue Vervain	p, wt	June–August
Vermonia fasiculata / Common Ironweed	p, wt	August–September
Veronicastrum virginicum / Culver's Root	p	July–August
Viola pedata / Bird's Foot Violet	p	May–July
Viola pedatifida / Prairie Violet	p	May–July
Zizia aurea / Golden Alexander	w, p, wt	May–July

Town Square Condo Native Woodland/Prairie Trees/ Shrubs in Targeted Sites

Plant Type	*NPDH*	*Flowering Cycle*
Acer rubrum / Red Maple	w	March–May
Amelanchier arborea / Downy Serviceberry (Juneberry)	w	April
Betula nigra / River Birch	wt	May
Cornus alternifolia / Pagoda Dogwood	w	mid May–mid June
Cornus racemose / Grey Dogwood (established)	w	mid May–June
Cornus stolonifera / Red Osier Dogwood (established)	w, p, wt	late May–August
Fraxinus pennsylvanica / Green Ash (due to EAB these established trees are being removed)	w	April–May
Gleditsia triacanthos / Honey locust (established)	w	May–June
Gymnocladus dioicus / Kentucky Coffee Tree	w	June
Juniperus virginiana / Eastern Red Cedar	w, p	April
Liriodendron tulipifera / Tulip Tree	w	May–July
Pinus strobes / Eastern White Pines	w	May–early June
Pyrus ioensis / Prairie Crabtree	w	late April–May
Quercus bicolor / Swamp White Oak	w, p, wt	May
Quercus macrocarpa / Bur Oak	w, p	mid April–early June
Quercus palustris / Pin Oak (established)	w, p	late April–May
Quercus rubra / Red Oak	w	May
Symphoricarpos albus / Common Snowberry	w, p	late May–June

Plant Type	*NPDH*	*Flowering Cycle*
Thuja occidentalis / Northern White Cedar	w, wt	late April–May
Tilia americana / American Basswood	w	June–mid July
Viburnum cassinoides / Withe Rod	wt	May–June
Viburnum dentatum / Arrowwood Viburnum	w	May–early June
Viburnum lentago / Nannyberry	wt	late April–early June

Plants Purchased from:

Backyards for Nature Fair—Spring Valley Nature Center, Schaumburg, IL
Country Road Greenhouse—Rochelle, IL
JF New—Walkerton, IL
Midwest Gardens—Saint Charles, IL
Natural Gardens—Saint Charles, IL
Pizzo and Associates—Leland, IL
Possibility Place—Monee, IL
Random Acres—Schaumburg, IL

Plants Transplanted and Rescued from:

Bob Brusenbach (home), Lindenhurst, IL * (Prairie phlox transplanted)
Coventry Woods—Schaumburg estates home off Schaumburg Rd. west of Friendship Village
District 54 Nature Center, Schaumburg, IL (Shooting stars)
Friendship Village (Herb Demmel steward overseeing preserved woodlands (transplanted) and prairie garden plot from Ruth Macintyre)
Tony and Sandy Meo (home), Schaumburg, IL (Wild ginger transplanted)
Janis and Dan Moylan (home), Glenview, IL (Ostrich ferns transplanted)
Jane Solarz (home), Park Ridge, IL (Virginia bluebells transplanted)
The Wild Ones (Rolling Meadows, Hoffman Estates, Long Grove-Reed Turner woods)

Seed Exchange

Citizens for Conservation (for Spring Creek Restoration Project)
Friendship Village, Schaumburg under Herb Demmel
Spring Valley Nature Center, Schaumburg, IL

Donations and Grants

Country Road Nursery
JF New
North Cook County Soil and Water Conservation District—Palatine, IL $1,000

Pizzo and Associates
Projects primarily funded through Town Square Condominium Association—Schaumburg, IL

In Summation

Within almost a 20-year span approximately 175 different native species of forbs, grasses, sedges, shrubs and trees were introduced throughout a five acre lawn with about a half-acre of actual applied native eco-gardens, rain gardens and micro-habitats.

Appendix B

Workable Guidelines for Creating Eco-Gardens and Micro-Habitats

The following checklist can be used for homeowners' associations, owners of large tracts of land, and private individual homeowners. Several years as a native plant consultant and landscaper throughout the Chicagoland area has helped me develop workable guidelines for creating eco-gardens and micro-habitats.

For Your Project, Have You Considered?

- The type of project (noise or privacy buffer, butterfly garden, large restoration or plant communities)
- Other goals (reduction of chemical and water use)
- Appearance desired (low "designed" look, wild prairie, ground cover)
- Accommodating other neighboring landscapes
- Project and scope
- Project time-line (phasing in slowly instead of planting the entire site at one time)
- Cost parameters (installation and future maintenance)
- Maintenance level desired (minimum and extensive)
- Existing and proposed habitat attractive to wildlife
- Type of prairie plant materials desired for specific soil conditions (dry, mesic, wet mesic)
- Advantages/disadvantages of the site or parts of the site for prairie landscaping
- Site problems to be addressed or solved (drainage problems, poor or compacted soil, salt tolerant species required on some locations)
- Soil types
- Sun/shade patterns over the growing season
- Natural landscaping history in your area
- Pertinent local laws and regulations

- Rights-of-way and property lines (plat of survey)
- Location of utility lines (in northeastern Illinois, call JULIE 1-800-892-0123)

Background Questions for Consultant of Supplier

- Scope of services? (Designing, installing, maintaining)
- Plant materials provided by other landscape contractors or "home grown"
- Training, experience, knowledge
- Projects managed, role on those projects
- Landscape specialty
- Where can completed and in-process projects be seen
- References
- Major influences on professional direction
- Any work performed as a volunteer design professional
- Insurance coverage
- Guarantees

Details for Your Project

- Cost estimate—Maintenance required—Drawings/site plan
- Timeline—Justification for plant selections/locations
- Source of landscaping materials—Terms/conditions of payment
- Contract including all of the above

Appendix C

Where to Buy Native Plants

For guidelines from the Wild Ones and a list of nurseries carrying native plants of local ecotypes, check with a local chapter of Wild Ones, native plant societies, local nature centers, state natural resource departments, and USEPA zone offices. Nature centers or nurseries dealing exclusively with native plants are more apt to have stock of local ecotypes.

- Ask the nursery about the source of their plant material. Does it originate within your ecoregion?
- Beware of plant material dug from the wild or plants which are nursery-grown in pots after being dug from the wild. Plants should instead be nursery propagated from seed or cuttings, not collected from the wild. It is environmentally unethical and contrary to the mission of Wild Ones to buy plants dug from our last remaining natural areas to naturalize your yard.
- Ask for seedling stock, not clonal stock, nativars, cultivars, or horticulturally enhanced plants. Clonal stock, nativars, cultivars, and horticulturally enhanced varieties lack genetic variation. They are usually selected for bigger, showier flowers or more sturdy stems and this goal of aesthetic uniformity is at the expense of genetic diversity and benefits to wildlife dependent upon them. Cultivars and horticulturally enhanced varieties are often propagated asexually and thus are clones rather than unique, genetic individuals. Research on whether these cultivars function as well as native plants is in its infancy, and the results are mixed at best. Wild Ones strongly recommends using native plants rather than cultivars or horticulturally enhanced plants.
- Check with local lists of native plants to see if the varieties are native locally or horticulturally produced.

Guidelines printed with permission from Wild Ones: Native Plants, Natural Landscapes 2285 Butte des Morts Beach Road, Neenah, Wisconsin 54956, www.wildones.org, Wild Ones promotes environmentally sound landscaping practices to preserve biodiversity through the preservation, restoration, and establishment of native plant communities.

Chapter Notes

Chapter 1

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2. Illinois Environmental Council nationally rated Illinois 32nd in habitat acreage restored and preserved and 48th for setting aside open space land to protect natural pre-settlement (before 1820 A.D.) virgin conditions. 2019, http://ilenviro.org/conservation/.

3. Images of Olsen Rug Waterfalls and background: https://forgottenchicago.com/columns/northwest/olson-waterfall/.

4. Richard Louv, *Last Child in the Woods* (New York: Workman Publishing Company, 2005). Louv documents children's decreased exposure to nature in American society and how "nature deficit disorder" harms children and society. Through careful research the book concludes that direct exposure to nature is essential for healthy childhood development and for the physical and emotional health of children and adults.

5. Scott Sampson, *How to Raise a Wild Child: The Art and Science of Falling in Love with Nature* (Boston: Houghton Mifflin, 2015).

6. Richard Bull, *Summerhill, U.S.A.* (London: Penguin Books, 1970). This book takes a close look at 11 schools in the United States, including the Santa Fe Community School, that model their schools after Summerhill in England, whose headmaster was A.S. Neill. Principles of freedom, honesty, love, responsibility, self-discipline, happiness, and independent thinking are strongly encouraged.

7. Maria Svens and Sanna–Kaisa Juvone, "The Finnish Outdoor Classroom," March 4, 2017, http://www.cectalksnature.org/members-in-action-articles/the-Finnish-outdoor-classroom.

8. Michael Moore documentary, "Why Finland Has the Best Education," 2017, https://www.youtube.com/watch?v=XQ_agxK6fLs. Why the Finnish schools were at the top of the PISA (Programme for International Student Assessment) tables and the USA was near the bottom.

9. John Steinbeck, *The Grapes of Wrath* (London: Penguin edition, 1992), Chapter 28, p. 419. An extraordinary novel covering the Great Dust Bowl Depression through the lives of a struggling, Oklahoman farm family and community torn between the agricultural collapse of their land and their quest to find dignity amidst harsh and unjust working conditions. Throughout the novel they move from one migrant camp to another in search of a better life. Both the soil and migrant workers once attached to the land are caught up in the winds of change where little respect is given to both forces that make up the foundation of rural America.

10. John Muir, *My First Summer in the Sierra* (San Francisco: Sierra Club Books, 1988), Chapter 6, p. 110. One cannot escape from this universal truth in how nature works. As humans, we can only try to comprehend and experience the depth

of this never ending relationship with the web of life and beyond, despite our non-renewable resource "extractionist" culture's continual denial to recognize the ecology of living responsibly and reciprocally with the earth.

Chapter 2

1. Kelly Kindscher, *Medicinal Wild Plants of the Prairie: An Ethnobotanical Guide* (Lawrence: University Press of Kansas, 1992). A general discussion of the Prairie Bioregion precedes individual plant descriptions which include common, American Indian, and scientific names and what they mean. Also included are a formal description, discussion of food uses, and cultivation information. The food use information is gleaned from an extensive list of references and spiced with the author's own experience in preparing and eating these foods. This is the first book on edible plants of the region and should be a valuable reference for botanical, regional and North American Indian lore collections. Also, an excellent Native American plant usage reference for understanding medicinal and food benefits of the prairie is *Plants, People, and Paleoecology: Biotic Communities and Aboriginal Plant Usage* by Paul E. Minnis, published in 1984 by Illinois State Museum in Springfield, IL. As the indigenous peoples were forced to leave their native homeland, much of the plant knowledge they accumulated over generations was lost. Sadly, there isn't one single reservation or land set aside under a sovereign tribal ownership to honor these first peoples who roamed and lived among the flora and fauna of this tall grass prairie state.

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Chapter 3

1. Aldo Leopold, *A Sand County Almanac* (London: Oxford University Press, 1949), p. 19.

2. Radio interview with Doug Tallamy, soundcloud.com/wbez-worldview/learning-to-landscape-with; Essential

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2. William Cullina, *Guide to Growing and Propagating Wildflowers of the United States and Canada (New England Wildflower Society)* (Boston: Houghton Mifflin, 200), p. 181. (Under essay titled "Ants and Seed Dispersal").

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